DOCUMENT RESUME

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IDENTIFIERS	*Rock Valley College IL; *Tech Prep

ABSTRACT

A 1-year project was conducted to develop a tech prep model to prepare high school students for enrollment in postsecondary manufacturing technology programs at Rock Valley College (Illinois). During the year, education design teams consisting of mathematics, communications, science, and technical teachers and a counselor from each of seven participating schools were selected and trained. The teams worked together to develop articulation agreements, collect student information, develop lesson plans, and study the employment needs of manufacturers through employer visits and talks on employment opportunities and employer performance standards. Team members also received 100 hours of training. Presentations were developed to promote tech prep, student surveys were conducted, and articulation agreements were drawn up for articulation between high schools and Rock Valley College. Each participating school submitted an implementation plan for the following year. (Appendixes, which make up most of the document, include copies of the visuals from the publicity presentations, student surveys, model articulation agreements, implementation plans, program evaluation, publications, assessment materials, and lesson plans.) (KC)

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ED347348

Tech Prep Model for Careers
in Manufacturing

Illinois State Board of Education
Robert Leininger, State Superintendent
of Instruction

Rock Valley College/Career
Education Associates
of North Central Illinois (CEANCI)

Department of Adult, Vocational &
Technical Education
Vocational Education Program Improvement
Section

Project Directors:
Donald M. Johnson, Dean
Vocational-Technical Education
Rock Valley College
Julie Nichols, Director of CEANCI

Funding: Department of Commerce &
Community Affairs, JTPA Programs,
Job Training Section

Funding Contract Number:
#1-D307-511 July 1, 1990-June 30, 1991

Management Team:
Dave Miller
Dave Zumdahl
Karl Jacobs
Dick Fairgrieves
John Mink
Pat Derry
Pilot School Representatives

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Office of Educational Research and Improvement
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Jerry Frang

Winnebago High School
Robert Colborn
Fred Bruning
Trudy Berger
Ernie Johnson
Betty Szott
David Zimmerman

Belvidere High School
Frank Evans
Kathy Colwell
Ken Storms
Carl Benassi
Kris Johnson
Dan Fraker

Hononegah
David Davidson
Rick Webster
Bob Moloney
John Baggiore
Pat Cotter
Kevin Burns

Pecatonica High School
Dave Zumdahl
Mary Drury
Merrill G. Hubble
Pam Novotnak

Jefferson High School
Maurice Sullivan
Dave Johnson
June Lyons
Janice Henningsen
Ray Kelley
Darlene Osborne
Jack Armstrong

CE 061 588

BEST COPY AVAILABLE

Harlem High School
Irving Miller
Ellen Letourneau
Bill Rosecrance
Tom Yoe
Carol Falzone
Daniel Lang

Durand High School
Frank Miller
Christian Boehlefeld
John Hagan

Tech Prep Advisory Committee

John Mink	Rockford Spring
Fred Bornkamp	Sundstrand
Pat Derry	Header Die
Bruce Kroger	IBM
Walt Lewis	Ingersoll
Bruce Martin	Mattison Machine Works
Bob Mullins	Abar Ipsen
Amy Hamling	Abar Ipsen
Roger Pelkey	Elco
Steve Schinzer	Elco
Jim Rilott	Atwood
Gerhard Strauss	Danfoss
Jerry Busse	Rockford Toolcraft
Larry Gloyd	Clarcor
Ron Moreau	Clarcor
Sue Grans	Rockford Chamber
Gary Hedges	Sundstrand
Art Mattison	Mattison Machine Works
Jack Packard	Elco
Dave Peterson	Rockford Products
Mike Cassaro	Atwood
Warren Jackson	Warren Industries
Randy Sturm	Valley Manufacturing
Rolland Westra	Rock Valley College
Don Williams	Rock Valley College

A. **FINAL REPORT ABSTRACT**

Project Title: Tech-Prep Model for Careers in Manufacturing Technology

Agreement Number: Contract #1-0307-511, JTPA Program

Project Directors: Don Johnson, Dean
Rock Valley College
Rockford, IL

Julie Nichols, Director
Career Education Associates
of North Central Illinois
Rockford, IL

Funding Agency: Department of Commerce and Community Affairs
JTPA Programs, Job Training Section

Location of Funding Agency: Springfield, IL

Time Period Covered: July 1, 1990-June 30, 1991

Project Goals:

To develop a Tech Prep model to prepare high school students for enrollment in post secondary manufacturing technology programs.

Major Accomplishments:

The Tech Prep program focus in FY91 was to select and train Education Design Teams from participating schools. A math, communication, science and technical teacher and a counselor from each school made up the team. The interdisciplinary teams worked together to develop articulation agreements, collect student information, develop lesson plans, study the employment needs of manufacturers through employer visits and talks on employment opportunities and employer performance standards. All team members participated in one hundred hours of training.

Team Building:

- -Seven teams representing seven high schools and Rock Valley College.
- -Each interdisciplinary team had five members: math, science, communications, industrial teacher and counselor.
- -Team support by two industrialist team members viewed as "champions" for change in education.
- -Focus on team collaboration through a philosophy that integration cannot be achieved by isolating disciplines.

Staff Development:

- -In-service workshops held twice per month.
- -Team members received six hours of graduate credit after completing one hundred hours of training.
- -Training included team building, learning styles, cooperative learning, curriculum integration, employer performance standards, employer visits, interdisciplinary cooperation and program articulation.

Business/Industrial Involvement:

-Twenty-five serving on a Tech Prep advisory committee.
-Provide summer internship for team members.
-Serve on management team and resource for Education Design Teams.
-Serve on committee to develop performance standards for employment in manufacturing.
-Serve on sub-committee to address marketing

Products Delivered:

Tech Prep Presentation - Three presentations were developed to promote Tech Prep: 1) Selling Tech Prep to education, 2) Selling Tech Prep to Education Design Teams, 3) Tech-Prep, Where to Start - Illinois Vocational Association. Copies of the visuals are attached. (Attachment A)

Student Surveys - To help plan a Tech Prep delivery system. A student survey was developed and conducted, twenty percent of seniors and ten percent of 1988 graduates were surveyed by each education design team. A copy of the survey instrument and the analysis from one of the participating high schools is attached. (Attachment B)

Articulation Agreements - A format was established for the development of high school/Rock Valley College articulation agreements. Articulation plan attached. (Attachment C)

Implementation Plan - Each school was required to submit an implementation plan. An example of a high school plan is attached. (Attachment D)

B. PROJECT GOALS AND ACCOMPLISHMENTS:

1) Demonstration of substantial commitment to Tech Prep from building administrators, counselors, and all involved staff at both secondary and post secondary levels.
Accomplishments: The following are examples of local commitment in support of the RVC/CEANCI Tech Prep initiative.

-Seven superintendents, ESR superintendent, College president and representatives from industry served on the executive committees. The purpose of the committees was to oversee and direct the project.
-Thirty-five educators from the seven participating schools were members of the Education Design Team. All took part in 100 hours training to prepare them to be Tech Prep champions in their schools.
-One team attended the IVSSN Empowerment Workforce Conference.
-The Dean of Vocational-Technical Education and the Director of CEANCI spent forty percent of their time on the project. They attended all state meetings and promoted the RVC/CEANCI Tech Prep Manufacturing Mode. (IVA, NIU, Rotary, Kiwanis, National State Studies)
-Attended the German Skills Standards Symposium (Four educators/four from industry).

2) A commitment of staff time and local resources to the development and implementation of Tech Prep programs.
Accomplishments: The commitment of time was extensive during FY91 to support the project.

- -Each Education Design Team member spent over 100 hours in staff development.
- -QAP funds from Rock Valley College and CEANCI were used to support the project (RVC 8,000/CEANCI 10,000)
- -Advisory committee members (25) provided many hours of support, plus representatives from industry helped with the summer internship program (50).
- -Middle school students (1150) participated in career and technical awareness activities conducted by RVC and CEANCI.
- -Superintendent and principals supported the project.

3) A program outline including a sequence of courses which culminate with an Associate degree.
Accomplishments: Each participating high school has developed articulation agreements with Rock Valley. The agreements focus on a four year sequence of high school classes in preparation for post-secondary education (math, science, communication and technical). The EFE region has developed an ICP to make this process more purposeful. A sample ICP is included in attachment G.

4) Evidence that Tech Prep programs appear on secondary registration information and other counseling information.
Accomplishments: Goal four will be addressed in the FY92 Tech Prep plan. The goal will be accomplished by February, 1992.

5) Written sequence of courses which are deemed acceptable preparatory courses at the secondary level and culminate in an Associate degree.
Accomplishments: Refer to goal number three. Goal five will be accomplished through the signing of formal articulation agreements. The agreements will include high school course sequence.

6) Written articulation agreements between secondary and post secondary providers which allow students to continue their education with reduced duplication of efforts.
Accomplishments: Refer to accomplishments under goal one.

7) A written information (pamphlet or registration information) which communicates the Tech Prep Associate degree sequence to parents and students.
Accomplishments: Information about Tech Prep was included in the CEANCI eighth grade information brochure that was mailed to 5,000 parents in the CEANCI region. Additional publications are planned for Tech Prep in FY92.

8) A written individual career plan (ICP) for each student enrolled in Tech Prep Associate degree.
Accomplishments: Refer to accomplishments under goal three. ICP's have been provided for all ninth and tenth grade students in the CEANCI region with the class of 1995 to start those plans in the fall of 1991. A sample ICP is included in attachment G.

9) Evidence of curriculum revision to reflect Tech Prep concepts and applied learning.
Accomplishments: Curriculum revisions were addressed in the implementation plans completed for each participating high school's education design team. Removing the barriers that prevent the implementation of Tech Prep will be addressed in the fall 1991.

10) Evidence of curriculum revision to reflect Tech Prep concepts and applied learning.
Accomplishments: Refer to accomplishments under goal three and nine.

11) A plan to implement Tech Prep throughout the regional delivery system and/or community college district.
Accomplishments: The FY92 Tech Proposal includes a plan to implement Tech Prep throughout EFE CEANCI region. In addition, each of the FY91 schools have submitted an implementation plan for their schools. Because of limited FY92 resources, implementation in all district high schools will be delayed.

12) A clearly defined set of student entrance criteria and a plan for assessing potential students.
Accomplishments: Interest inventories are available to students in the CEANCI region. Rock Valley College has established College and program admission requirements that are published in College literature. The College also has programs and students services that address student remediation. In FY91 high school students were surveyed as part of the Tech Prep initiative.

13) An in-service plan designed to assist vocational and academic instructors in understanding applied learning, integration, and Tech Prep concepts so that every student will succeed.
Accomplishments: A majority of the FY91 Tech Prep activities addressed goal thirteen. The Education Design Team members participated in 100 hours of training designed to help vocational and academic instructors to understand applied learning and Tech Prep concepts.

Dr. Gene Bottoms provided instruction for Education Design Teams and provided sessions at the Harlem Learning Conference. Over 1,500 attended the conference.

The FY92, four sessions to address Tech Prep education for all will be presented during the October Boone-Winnebago Institute day. The attendance will be over 2,500.

FY92 integration strategies are included in Rock Valley College's and CEANCI's DAVTE Plan, Section #4, Carl Perkins grant. The target programs in Section #4 align with the manufacturing and business programs in the FY92 Tech Prep proposal.

14) Regularly scheduled joint meetings for vocational and academic instructors to work on curriculum revision, teaching styles, integration, etc.
Accomplishments - The accomplishments in goal two addresses goal fourteen. The training of Education Design Teams will continue in FY92. Administrative Academy sessions through ESC #1 will address the role of the administrators in Tech Prep. There are plans to include teachers in the Academy.

15) Evidence of academic and vocational curriculum revision to reflect Tech Prep concepts and applied learning.
Accomplishments: Upon delivery of the performance standards from Northern Illinois University the issue of curriculum revision will be addressed. Through the summer internship, the Education Design Team members developed manufacturing application lesson plans. The plans will be tested in the fall 91. (Attachment H)

16) A secondary "completion credential" that guarantees acceptance in an Associate degree program.
Accomplishments: Refer to accomplishments in goal three.

17) Commitment from both community colleges and baccalaureate institutions that secondary courses will be accepted to meet entrance requirements for respective institutions.
Accomplishments: Refer to accomplishments in goal three. Rock Valley College has an articulation agreement with NIU for Electronic Engineering Technology.

18) A written articulation agreement addressing both academic and vocational courses sequences approved by all regional delivery systems and community colleges involved.
Accomplishments: Refer to accomplishments in goal three.

19) Written transfer agreements between community colleges and four year baccalaureate institutions.
Accomplishments: Rock Valley College has completed an articulation with Northern Illinois University for the College's Electronics Engineering Program.

20) Industry developed standards that clearly defined competencies; i.e. math and reading levels, technical competencies that are expected to attain employment.
Accomplishments: Refer to accomplishments in goal fifteen.

21) A commitment form potential employees that Tech Prep Associate degree completers will be given priority status from employment and/or wage incentives.
Accomplishments: The Tech Prep advisory committee has started to address goal twenty-one. During the Summer Internship program, employers indicated a support for Tech Prep priority for employment.

22) Assurances that business and/or industry will provide internships or other experiential learning opportunities to Tech Prep Associates degree program participants.
Accomplishments: Industry provided places for the Summer Internship. An active advisory committee from industry has been in operation. Several employers have indicated their support for workbase learning. Advisory committee members participated in the NIU Performance Standards project.

23) Written in-service plan to communicate Tech Prep/Associates degree programs to counselors, building administrators and instructional staff.
Accomplishments: Many of points in goal 23 are included in the FY92 Tech Prep plan. This would include peer coaching by FY91 Team members. The need for teachers to contribute to local staff development plans is to be addressed through the Administrative Academy.

24) Written, visual, and/or audio marketing materials developed to communicate the Tech Prep concept to the general public.
Accomplished: Refer to accomplishments under goal 7. The FY92 plan includes plan to inform the general public.

25) A written plan to communicate the Tech Prep concept using materials developed.
Accomplished: To be addressed in FY92

C. EVALUATION AND IMPACT:

The FY91 Tech Prep initiative was evaluated by the Education Design members at the conclusion of the Tech Prep Summer Internship program. Results of the survey are attached. A team member's journal is also attached. (Attachment E)

An informal survey of advisory committee members and those employers that participated in the Summer Internship indicated their satisfaction with the FY91 initiative. All are anxious to continue in FY92. Superintendents also support the efforts. (Attachment E)

D. **RESOURCE LISTING:**

Material Resources: No special resources or materials were purchased other than reference materials for distribution to team members.

Human Resources:
Paid Participants:

Kathy Colwell	English Teacher	Belvidere High School Team Member
Rick Webster	English Teacher	Hononegah High School Team Member
June Lyons	English Teacher	Jefferson High School Team Member
Dave Bloomstrand	English Teacher	Rock Valley College Team Member
Fred Bruning	English Teacher	Winnebago High School Team Member
Ellen Letourneau	English Teacher	Harlem High School Team Member
Pam Novotnak	English Teacher	Pecatonica High School Team Member
Ken Storms	Guidance Counselor	Belvidere High School Team Member
Bob Moloney	Guidance Counselor	Hononegah High School Team Member
Janice Henningsen	Guidance Counselor	Jefferson High School Team Member
Larry Murphy	Guidance Counselor	Rock Valley College Team Member
Trudy Berger	Guidance Counselor	Winnebago High School Team Member
Bill Rosecrance	Guidance Counselor	Harlem High School Team Member
Christian Boehlefeld	Guidance Counselor	Durand High School Team Member
Carl Benassi	Industrial Teacher	Belvidere High School Team Member
John Baggiore	Industrial Teacher	Hononegah High School Team Member
Ray Kelley	Industrial Teacher	Jefferson High School Team Member
Randy Barnhart	Technology Teacher	Rock Valley College Team Member
Ernie Johnson	Industrial Teacher	Winnebago High School Team Member
Tom Yoe	Industrial Teacher	Harlem High School Team Member
Merrill Hubble	Industrial Teacher	Pecatonica High School Team Member
Kris Johnson	Mathematics Teacher	Belvidere High School Team Member
Pat Cotter	Mathematics Teacher	Hononegah High School Team Member
Darlene Osborne	Mathematics Teacher	Jefferson High School Team Member
Diane Koenig	Mathematics Teacher	Rock Valley College Team Member
Betty Szott	Mathematics Teacher	Winnebago High School Team Member
Carole Falzone	Mathematics Teacher	Harlem High School Team Member
John Hagan	Mathematics Teacher	Durand High School Team Member
Dan Fraker	Science Teacher	Belvidere High School Team Member
Kevin Burns	Science Teacher	Hononegah High School Team Member
Jack Armstrong	Science Teacher	Jefferson High School Team Member
Jerry Frang	Science Teacher	Rock Valley College Team Member
David Zimmerman	Science Teacher	Winnebago High School Team Member
Dan Lang	Science Teacher	Harlem High School Team Member
Mary Drury	Science Teacher	Pecatonica High School Team Member

Unpaid Participants:

Project Directors-	Donald Johnson
	Julie Nichols
Management Team-	Dave Miller
	Dave Zumdahl
	Karl Jacobs
	Dick Fairgrieves
	John Mink
	Pat Derry

Unpaid Participants (con't)

Advisory Committee-	John Mink	Rockford Spring
	Fred Bornkamp	Sundstrand
	Pat Derry	Header Die
	Bruce Kroger	IBM
	Walt Lewis	Ingersoll
	Bruce Martin	Mattison Machine Works
	Bob Mullins	Abar Ipsen
	Amy Hamling	Abar Ipsen
	Roger Pelkey	Elco
	Steve Schinzer	Elco
	Jim Rilott	Atwood
	Gerhard Strauss	Danfoss
	Jerry Busse	Rockford Toolcraft
	Larry Gloyd	Clarcor
	Ron Moreau	Clarcor
	Sue Grans	Rockford Chamber
	Gary Hedges	Sundstrand
	Art Mattison	Mattison Machine Works
	Jack Packard	Elco
	Dave Peterson	Rockford Products
	Mike Cassaro	Atwood
	Warren Jackson	Warren Industries
	Randy Sturm	Valley Manufacturing
	Rolland Westra	Rock Valley College
	Don Williams	Rock Valley College

Summer Internship Program -Over fifty employees in participating companies.

E. PROBLEMS:

The goals and dissemination planning outline in the FY91 Tech Prep proposal were accomplished. The time commitment needed to implement the plan was greater than expected. Although accomplished, the project goals should have been reduced to a more reasonable program expectation for FY91.

The Tech Prep directors experienced problems in five areas.

Communications: The mission of the Tech Prep'project needs to be communicated to all participants. With a new initiative, participants may develop their own mission and not support the project. The problem was addressed through group meetings, involvement of all participants, extensive planning and listening to concerns.

Misinformation: Tech Prep education is difficult to explain, for there are many successful models throughout the country. To implement Tech Prep, the champions must be provided with accurate and appropriate information. A well defined mission and outcomes plus the coaching of participants helped to solve the problem.

Where to Start: Determining where to start and sequential steps to implement Tech Prep is a problem. The evaluation of other Tech Prep models, involvement of educators/industrialists, feedback from educators and the willingness to change helped the directors accomplish FY91 goals.

Linkage of Activities: Education Design Team members must understand the reasons for the training activity. Education Design Team members were continually informed of the reasons for each part of the 100 hours of training.

Time Commitment: It is easy to underestimate the time needed to direct the development of a Tech Prep project. High level administrators must be involved in the project.

F. CONCLUSIONS AND RECOMMENDATIONS:

Refer to the enclosed video tape. Julie Nichols, Director, CEANCI; Don Johnson, Dean, Rock Valley College; and Gene Roth, Professor, Northern Illinois University, comments and recommendations are included on the video.

G. PUBLICITY:

Refer to attachments for published materials. The project was visited by the State Board of Education staff, Office of Community College Research and Leadership - University of Illinois, graduate student from Northern Illinois University, area principals and superintendents, advisory committee members, Sauk Valley College, State Directors - South Dakota, and Gene Bottoms. (Attachment F)

ATTACHMENT A

PRESENTATIONS:

-Selling Tech Prep
-Staff Development
-Where to Start?

WHAT IS TECH PREP

?

TECH PREP
PROBLEMS
Communication
Misinformation
Where to Start
Linkage of Activities
Time Commitment
17

PROBLEM:
COMMUNICATION

SOLUTION:

- Group Meetings
- Total Involvement
- Planning
- Listening

PROBLEM:
MISINFORMATION

$2 + 2 = 5$

SOLUTION:

Coaching

Define Mission / Outcomes / Terms

PROBLEM:
WHERE TO START

SOLUTION:

Evaluate Other Programs

Involvement

Feedback

Willing to Change

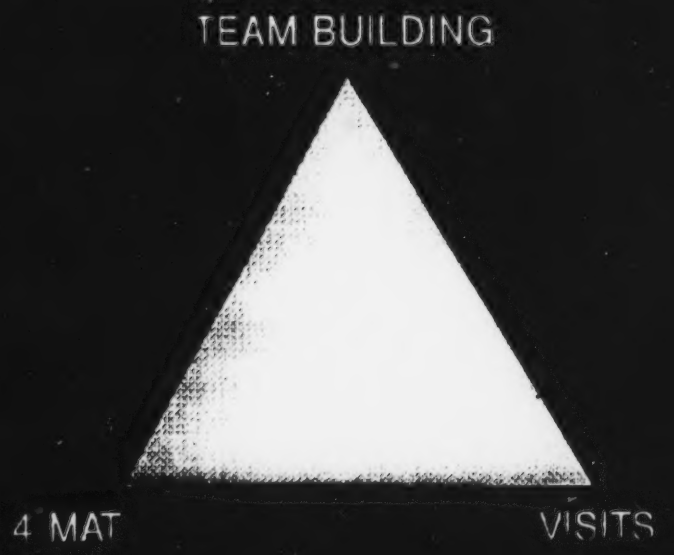
PROBLEM:
LINKAGE OF ACTIVITIES

SOLUTION:

Communicate

Communicate

Communicate



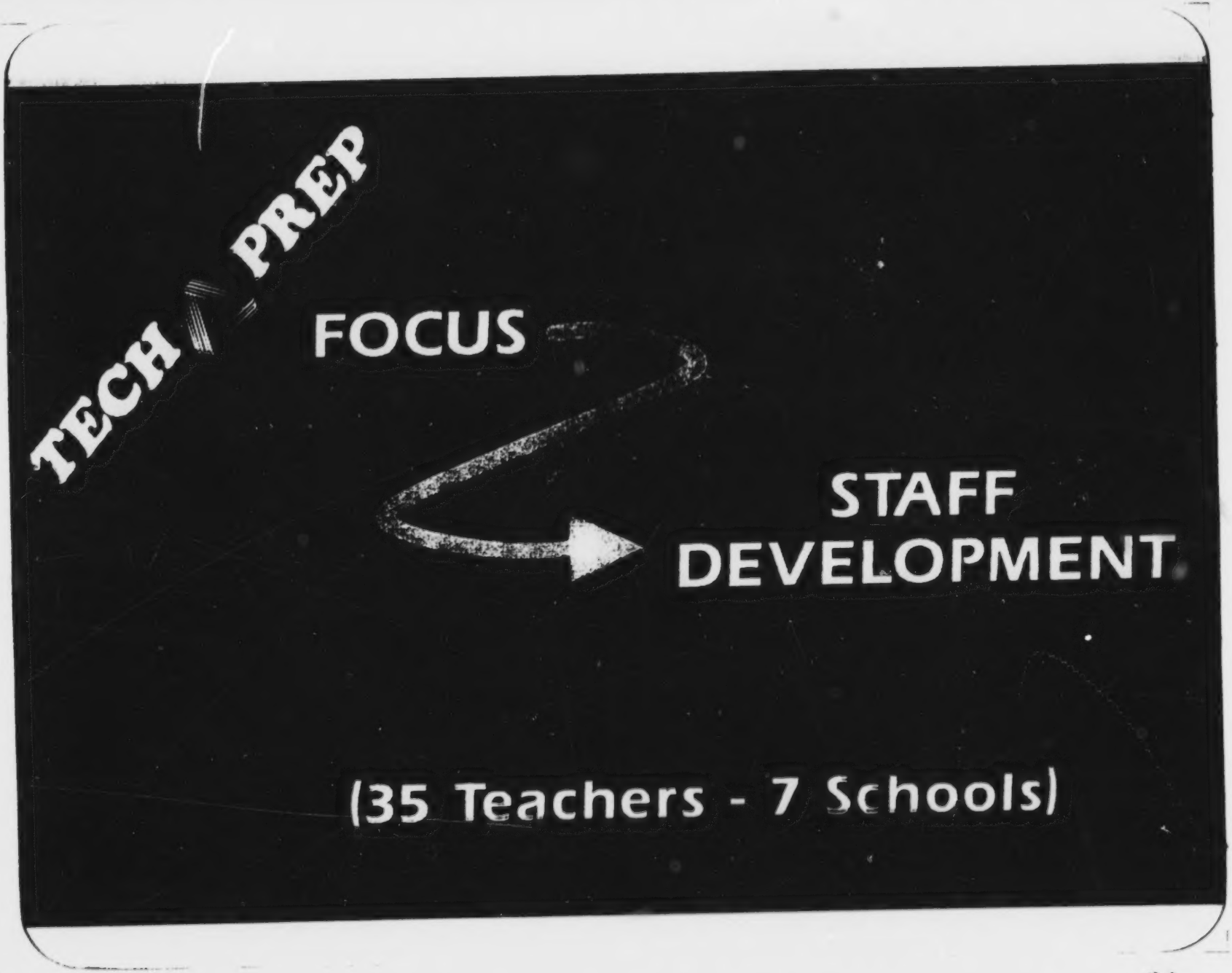
PROBLEM: TIME COMMITMENT

SOLUTION:

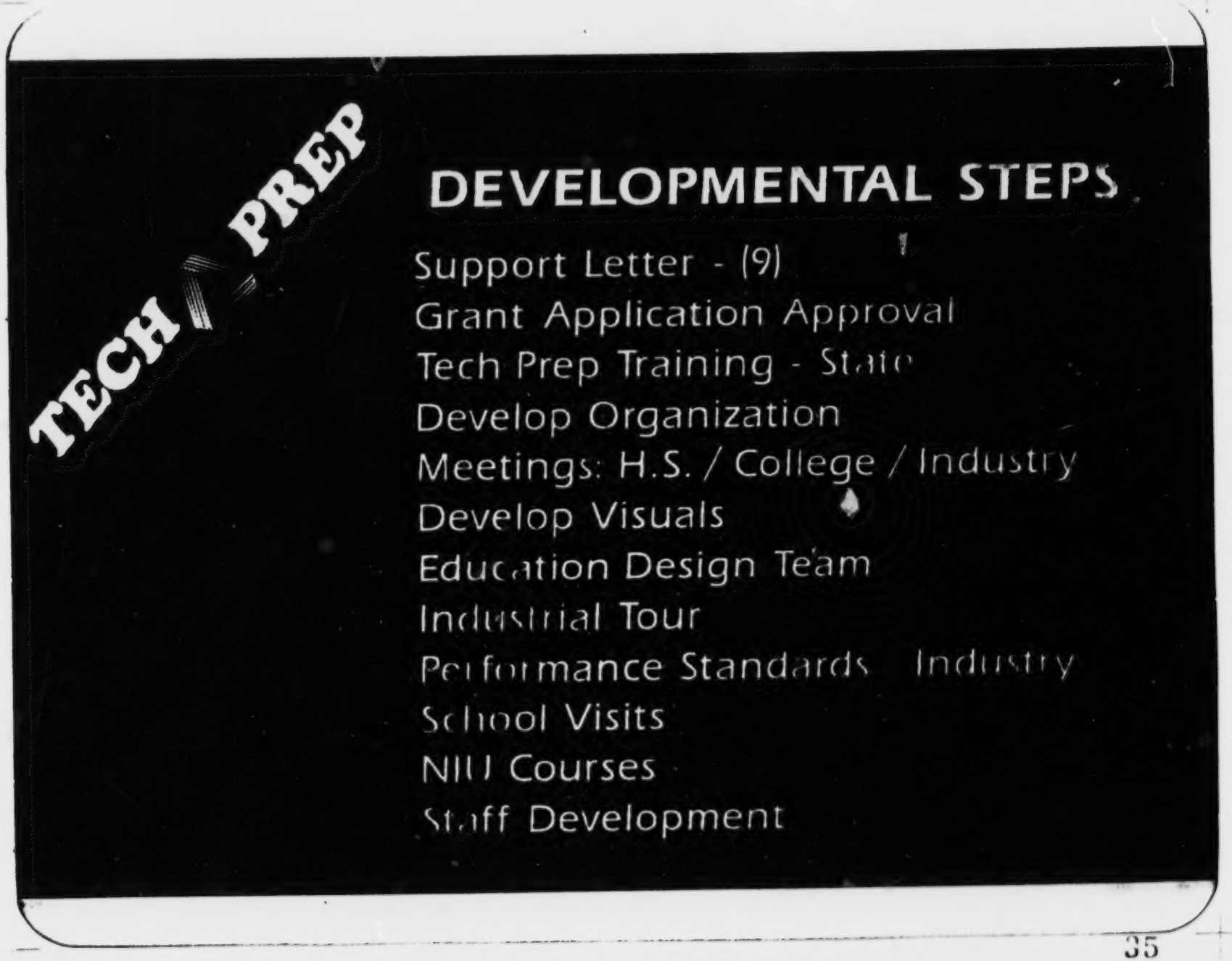
?

27

TECH PREP
DO DIFFERENTLY
Reduce Number of Schools
More Time with Principals
Start Earlier
Additional Funding
Employ Curriculum Expert
Expand Communications
Bite Off Less


TECH PREP
FOCUS
STAFF DEVELOPMENT
(35 Teachers - 7 Schools)

WHERE
DO WE START
?


TECH PREP
DEVELOPMENTAL STEPS
Support Letter - (9)
Grant Application Approval
Tech Prep Training - State
Develop Organization
Meetings: H.S. / College / Industry
Develop Visuals
Education Design Team
Industrial Tour
Performance Standards Industry
School Visits
NIU Courses
Staff Development

STAFF DEVELOPMENT

November - June, Over 100 Hours

- Orientation
- Industrial Visits
- NIU Courses
- Summer Internship

Rock Valley College CEANCI, Rockford, IL

STAFF DEVELOPMENT

NIU Courses

- Team Building
- Student Information
- Industrial Visits / Talks
- Cooperative Learning
- Integrating Curriculum
- Learning Styles
- Articulation
- Manufacturing Applications

Rock Valley College / CEANCI Rockford, IL

STAFF DEVELOPMENT

Deliverables

- Student Survey
- Articulation Agreements
- Lesson Plans
  (Math, Science, Communications, Industrial, and Conceptual)
- Implementation Plan

Rock Valley College / CEANCI, Rockford, IL

FY 1992

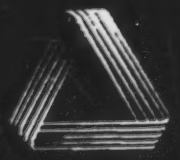
Continue Training - Design Team

Implement Lessons / Tech Prep Plan

Develop Tech Prep Curriculum

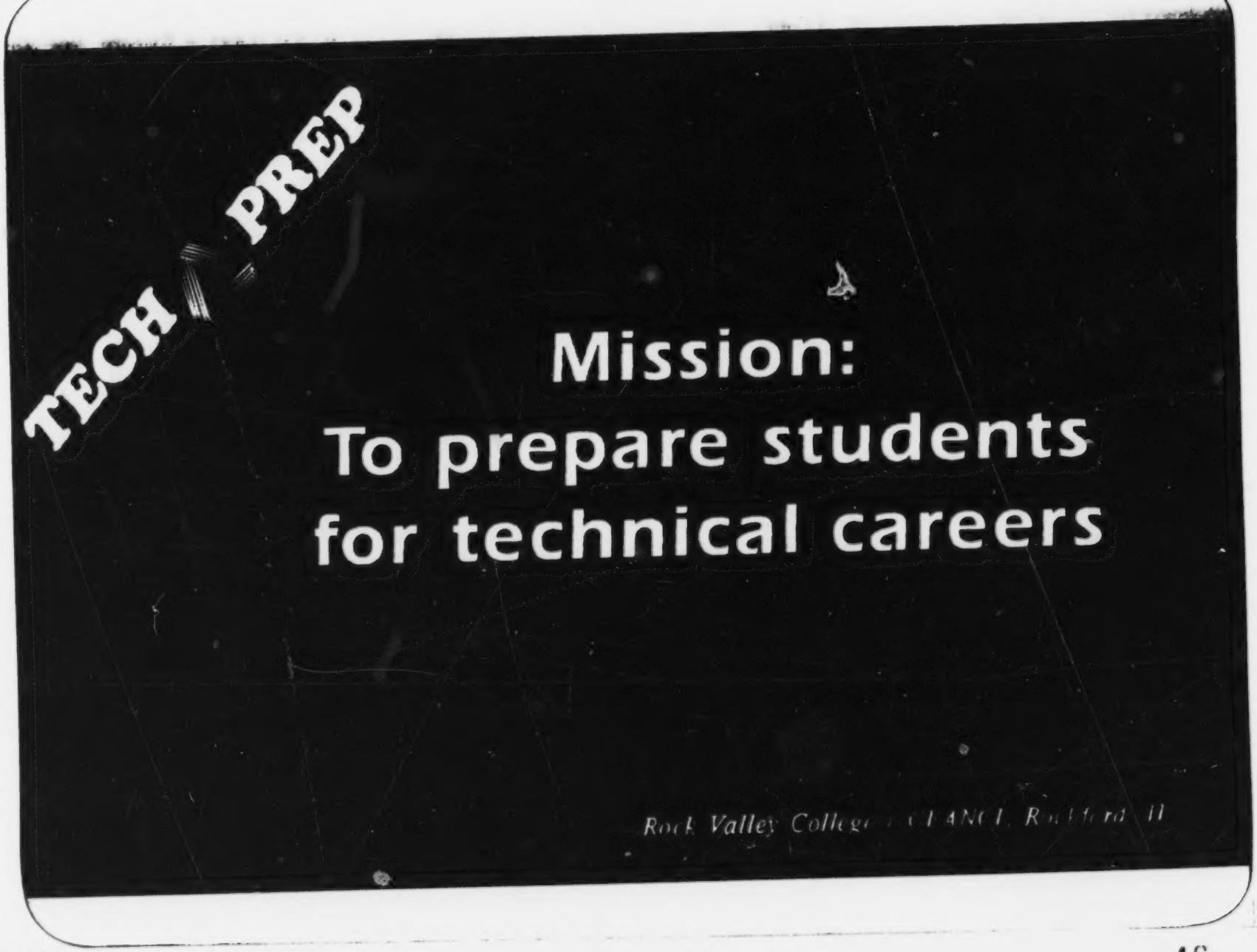
Complete Articulation Agreements

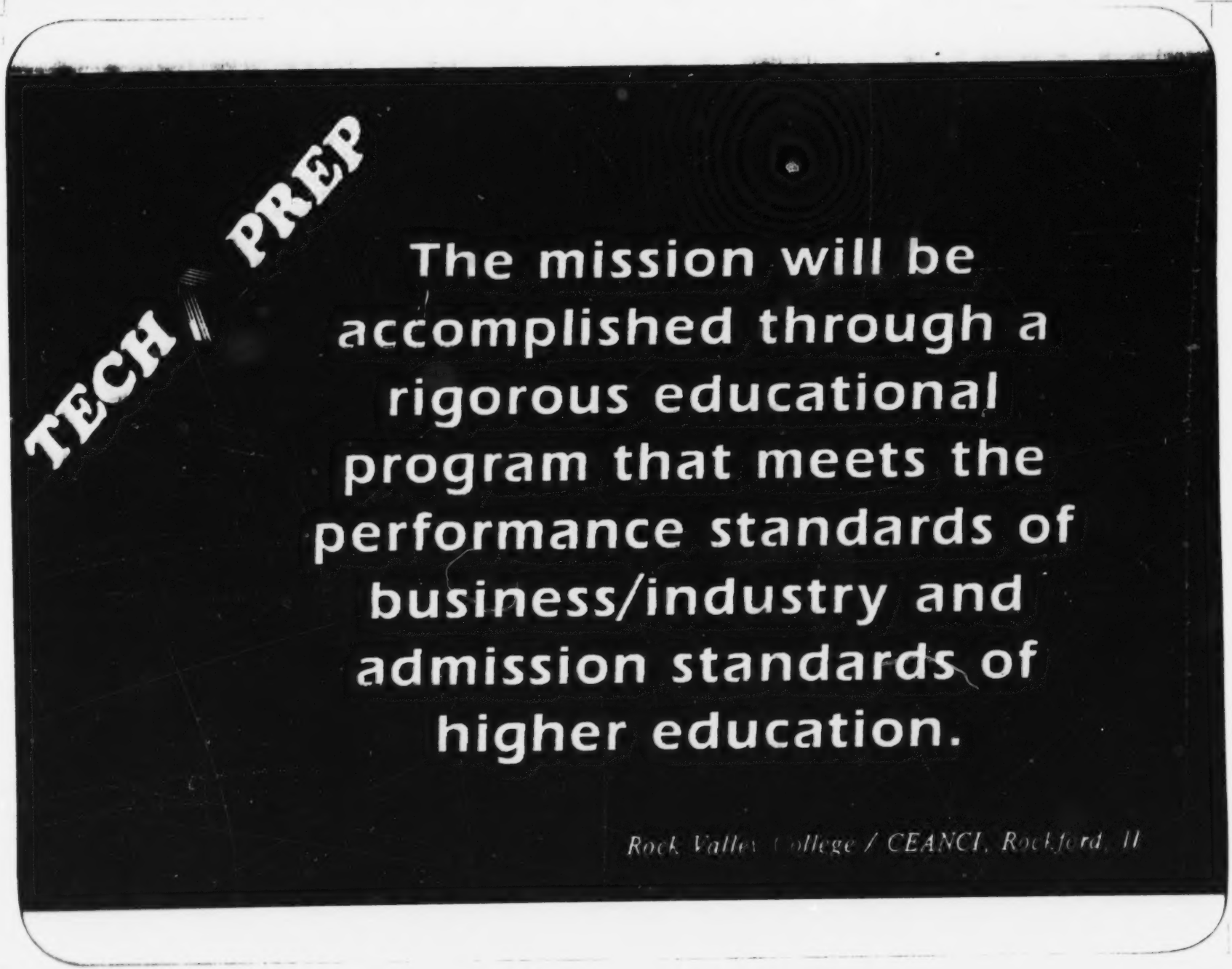
Expand Schools / Educators

WHAT IS TECH  PREP

?

Rock Valley College / TANCT Rockford, IL


TECH PREP
Mission:
To prepare students
for technical careers


TECH PREP
The mission will be accomplished through a rigorous educational program that meets the performance standards of business/industry and admission standards of higher education.
Rock Valley College / CEANCI, Rockford, IL

TECH PREP

IS NOT	IS
[illegible]	Integration and coordination of technical/academic concepts
Vocational education	A course of study that prepares student for life long learning
A secondary program	A partnership between all levels of education
Alternative program to college prep	Part of a total educational program
For entry level jobs only	For career preparation
A remedial program	A program of excellence
A job training program only	A program that prepares students for employment and continuing education

WHY TECH PREP?

EMPLOYER DEMANDS:

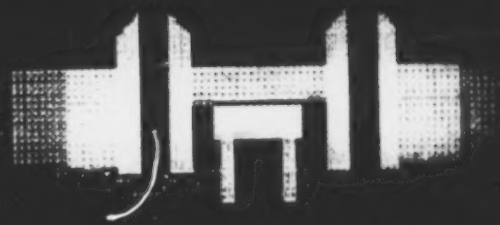
Advanced technical skills

Strong academic skills

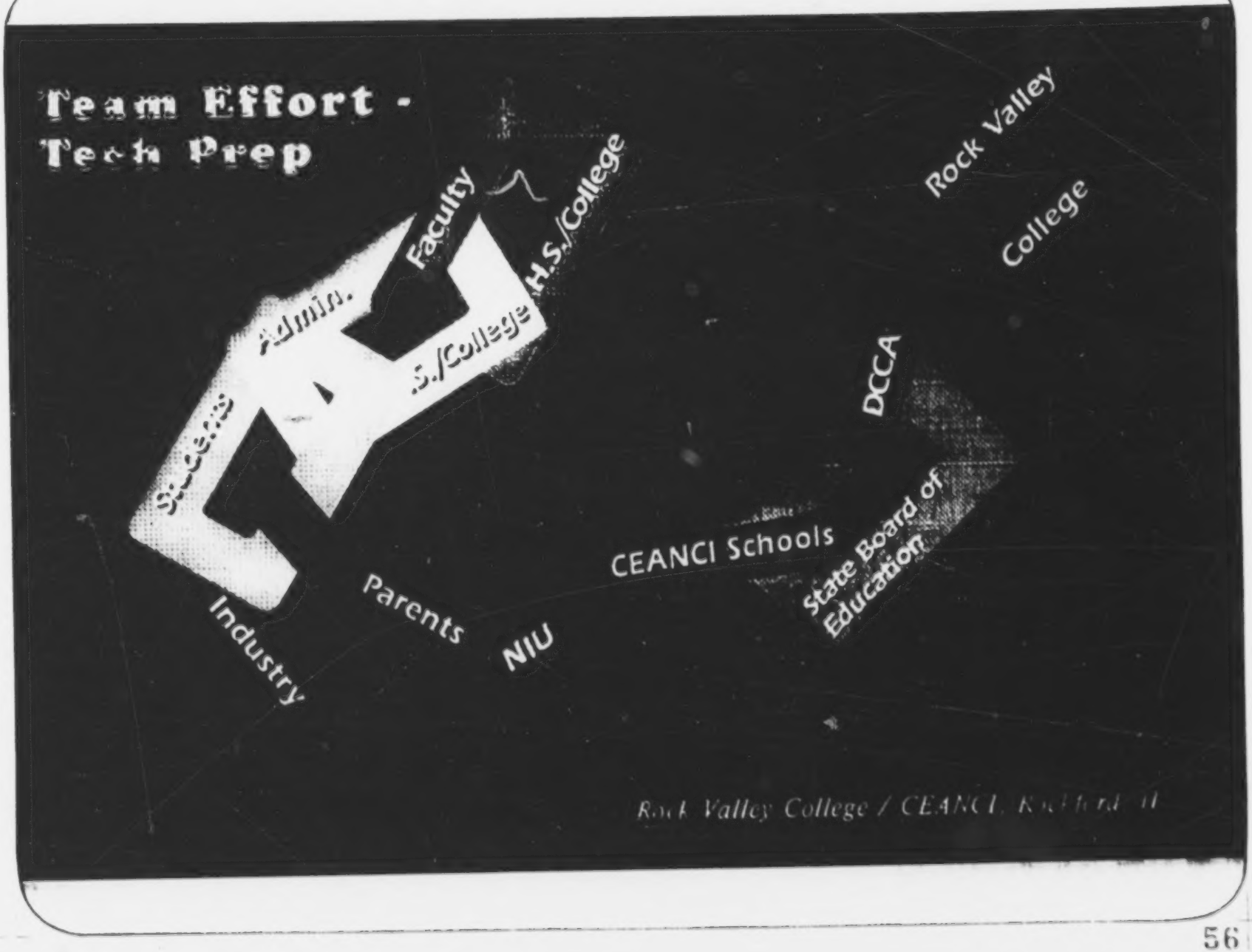
Interpersonal skills

Willingness to continue to learn

MANUFACTURING



Automated Manufacturing
Computer Aided Design
Electronics
Materials Management
Quality Engineering
Technical Writing
Tool and Die


Team Effort -
Tech Prep
Faculty
H.S./College
Admin.
S./College
Students
Industry
Parents
NIU
CEANCI Schools
State Board of Education
DCCA
Rock Valley College
Rock Valley College / CEANCI, Rockford, IL

Tech Prep Organization

II. Executive Committee

I. Management Team

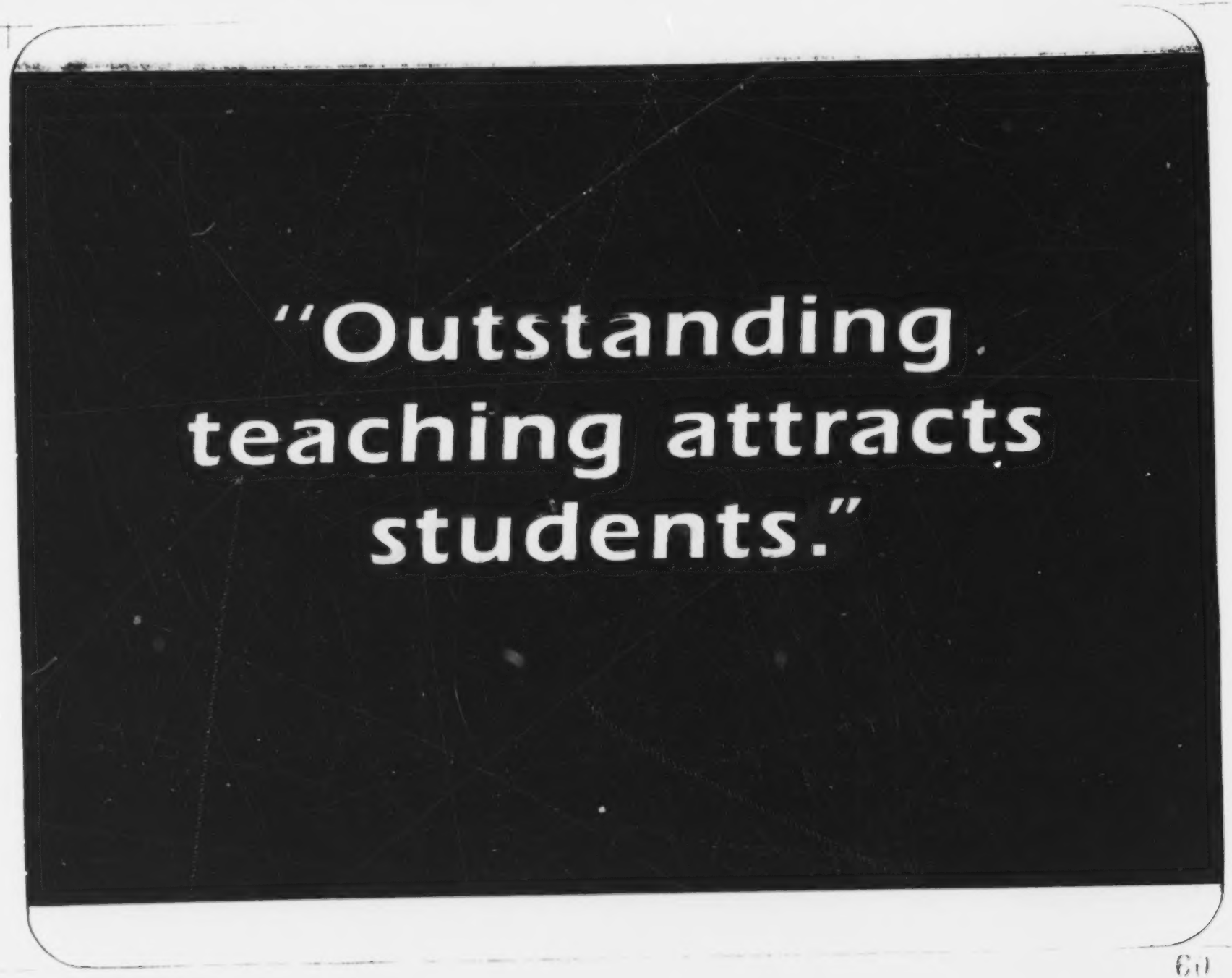
III. Project Directors

VI. NIU Tech Prep

IV. Education Design Team (7 schools)

V. Advisory Committee

Science Math Communications Vocational Counselor


"Outstanding
teaching attracts
students."

"If done correctly, students will not realize that they are in tech prep."

"Teachers are key to the success of tech prep."

TECH PREP CHAMPION:

Unrelenting enthusiasm

Academic competence

Openness

Realism

A GIVEN:

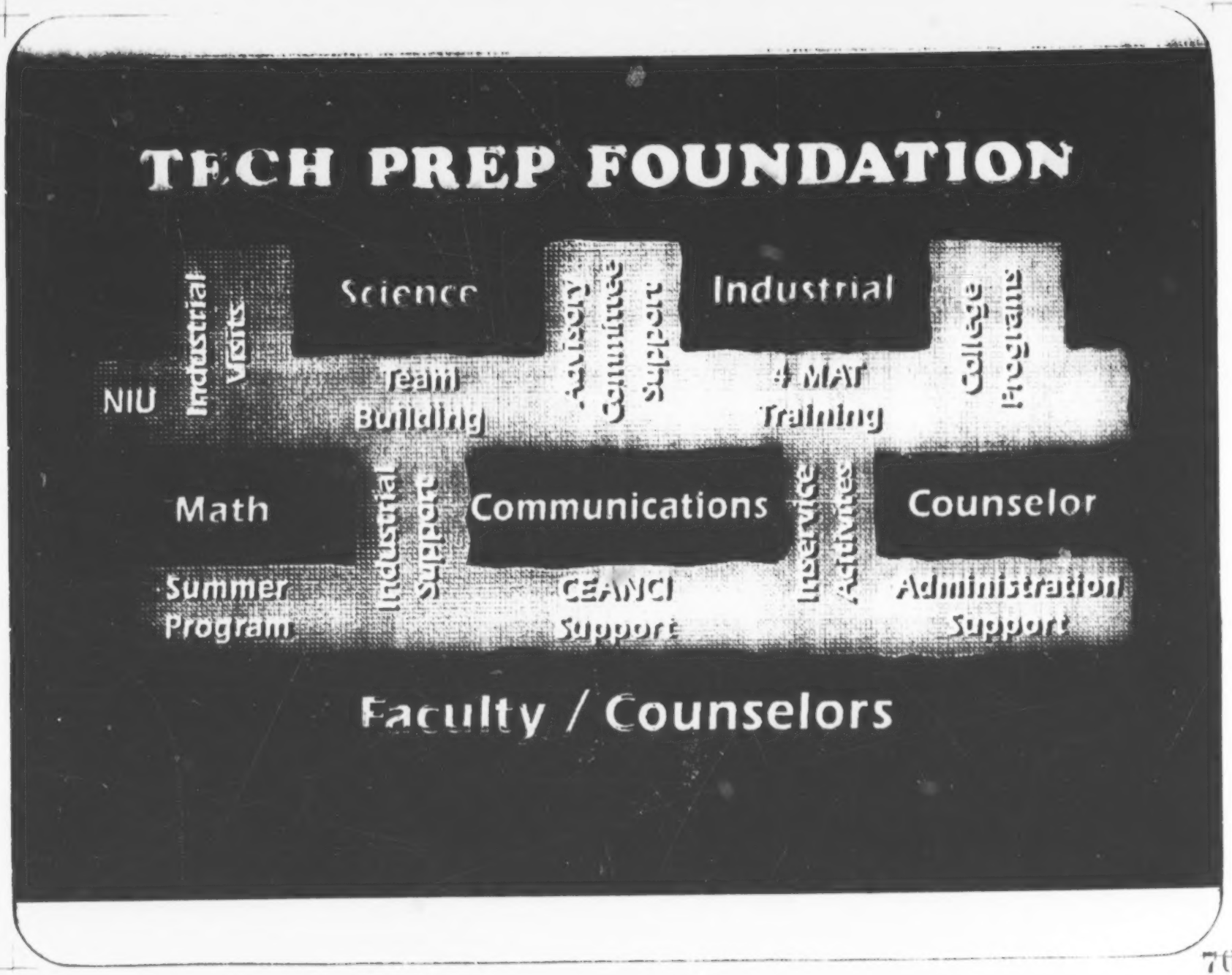
Results will take 4 years plus

We are going to make mistakes

We will have problems

We will change directions

We do not have all the answers


TECH PREP FOUNDATION
Science
Industrial
NIU
Industrial Visits
Team Building
Advisory Committee Support
+ MAT Training
College Programs
Math
Communications
Counselor
Summer Program
Industrial Support
CEANCI Support
Inservice Activities
Administration Support
Faculty / Counselors

ATTACHMENT B

SURVEYS:

-High School Student Survey
-Graduate Survey
-Survey Results
    Harlem High School
    Rock Valley College

MANUFACTURING CAREERS SURVEY

The purpose of this survey is to learn why more students DO NOT pursue manufacturing careers. Examples of manufacturing careers include automated manufacturing, computer aided mechanical design, electronic engineering, electronics, quality engineering, technical writing, tool and die, and materials management.

Your responses will remain confidential. They will be pooled with those from other survey participants to form an overall student viewpoint of manufacturing careers. Please give your honest, personal beliefs about the following items. Circle the number which reflects your opinion on each survey item.

1. Sex

   A-Male B-Female

2. There is pressure from my friends to take college bound courses.

   A-AGREE B-SLIGHTLY AGREE C-SLIGHTLY DISAGREE D-DISAGREE

3. My parents feel I should receive a four year college degree.

   A-AGREE B-SLIGHTLY AGREE C-SLIGHTLY DISAGREE D-DISAGREE

4. If I plan to go to college I should not take manufacturing courses.

   A-AGREE B-SLIGHTLY AGREE C-SLIGHTLY DISAGREE D-DISAGREE

5. I would like to find out more about manufacturing career options.

   A-AGREE B-SLIGHTLY AGREE C-SLIGHTLY DISAGREE D-DISAGREE

6. I do not believe that manufacturing courses are tailored for college bound students.

   A-AGREE B-SLIGHTLY AGREE C-SLIGHTLY DISAGREE D-DISAGREE

7. My parents encourage me to consider a manufacturing career.

   A-AGREE B-SLIGHTLY AGREE C-SLIGHTLY DISAGREE D-DISAGREE

8. Manufacturing jobs offer high wages.

   A-AGREE B-SLIGHTLY AGREE C-SLIGHTLY DISAGREE D-DISAGREE

9. Manufacturing careers are primarily for men.

   A-AGREE B-SLIGHTLY AGREE C-SLIGHTLY DISAGREE D-DISAGREE

10. Manufacturing careers allow the use of one's intelligence.

    A-AGREE B-SLIGHTLY AGREE C-SLIGHTLY DISAGREE D-DISAGREE

11. Manufacturing jobs allow for advancement.

A-AGREE B-SLIGHTLY AGREE C-SLIGHTLY DISAGREE D-DISAGREE

12. Manufacturing jobs allow for advancement.

A-AGREE B-SLIGHTLY AGREE C-SLIGHTLY DISAGREE D-DISAGREE

13. Working with others is an important part of a manufacturing job.

A-AGREE B-SLIGHTLY AGREE C-SLIGHTLY DISAGREE D-DISAGREE

14. The modern manufacturing environment is clean and safe.

A-AGREE B-SLIGHTLY AGREE C-SLIGHTLY DISAGREE D-DISAGREE

15. A majority of jobs in the Rockford Area are in manufacturing.

A-AGREE B-SLIGHTLY AGREE C-SLIGHTLY DISAGREE D-DISAGREE

16. Teachers and counselors think college prep courses are more important than manufacturing courses.

A-AGREE B-SLIGHTLY AGREE C-SLIGHTLY DISAGREE D-DISAGREE

PLEASE FINISH THE FOLLOWING STATEMENTS:

****

1. I would consider pursuing a manufacturing job if....

2. The following classes would help me to pursue a manufacturing career...

3. I was informed about opportunities in manufacturing by...

MANUFACTURING CAREERS SURVEY

The purpose of this survey is to learn why former high school students DID NOT pursue manufacturing careers. Examples of manufacturing careers include automated manufacturing, computer aided mechanical design, electronic engineering, electronics, quality engineering, technical writing, tool and die, and materials management.

Your responses will remain confidential. They will be pooled with those from other survey participants to form an overall viewpoint of manufacturing careers. Please give your honest, personal beliefs about the following items. Circle the number which reflects your opinion on each survey item.

1. Are you in a manufacturing career?

A-Yes B-No

2. Sex

A-Male B-Female

3. Manufacturing careers offered the level of prestige I desire.

A-AGREE B-SLIGHTLY AGREE C-SLIGHTLY DISAGREE D-DISAGREE

4. My parents encouraged me to choose a career other than in manufacturing.

A-AGREE B-SLIGHTLY AGREE C-SLIGHTLY DISAGREE D-DISAGREE

5. A career in manufacturing would pay enough to support the lifestyle I desire.

A-AGREE B-SLIGHTLY AGREE C-SLIGHTLY DISAGREE D-DISAGREE

6. Manufacturing careers offer unpleasant and/or unhealthy working conditions.

A-AGREE B-SLIGHTLY AGREE C-SLIGHTLY DISAGREE D-DISAGREE

7. I was not aware of opportunities in manufacturing careers during my school year.

A-AGREE B-SLIGHTLY AGREE C-SLIGHTLY DISAGREE D-DISAGREE

8. Job security in manufacturing careers is uncertain.

A-AGREE B-SLIGHTLY AGREE C-SLIGHTLY DISAGREE D-DISAGREE

9. The skills and abilities required for the manufacturing field were beyond my level of competence during high school.

A-AGREE B-SLIGHTLY AGREE C-SLIGHTLY DISAGREE D-DISAGREE

10. My high school coursework did not prepare me for a career in manufacturing.

A-AGREE B-SLIGHTLY AGREE C-SLIGHTLY DISAGREE D-DISAGREE

11. My peers had a great influence on my career choice.

1-AGREE 2-SLIGHTLY AGREE C-SLIGHTLY DISAGREE D-DISAGREE

12. Manufacturing careers did not interest me at the time of my high school graduation.

A-AGREE B-SLIGHTLY AGREE C-SLIGHTLY DISAGREE D-DISAGREE

PLEASE FINISH THE FOLLOWING STATEMENTS:

****

1. I would have considered a career in manufacturing if...

2. The biggest impact on my career choice was...

Manufacturing Career Survey Results Summary

Harlem High School
Carol Falzone
Dan Lang
Ellen Letourneau
Bill Rosecrance
Tom Yoe

Manufacturing Career Surveys were administered to 67 currently enrolled students and 27 graduates of Harlem High School during April, 1991. The purpose of these surveys was to aid the members of the Tech Prep Design Team in understanding why more students did not pursue manufacturing careers.

The students were chosen at random, and the survey was administered to current students during the school day. The graduates were also chosen at random. However, they were contacted by telephone, and their responses were recorded by individual Design Team members.

Following is a summary of the responses to the open ended questions posed to both groups. Although these questions were different in their orientation, we found the responses to be similar in outcome.

Students currently enrolled at Harlem High School who completed the TECH PREP survey certainly had a wide range of knowledge about manufacturing careers. They also had, for the most part, specific expectations about the careers they intend to enter after graduation.

In completing the statement, "I would consider pursuing a manufacturing job if...," the responses showed that a significant number of students had no interest in this field. Others wished they had more information about manufacturing careers. Some students felt, even at this time in their lives, they did not have the abilities or qualifications.

There was an overwhelming desire for better pay, benefits, working conditions, and job stability in order to even consider this field. Another perception was stated by one respondent, a female student. She wrote, "... if I were a guy, and the job weren't so messy."

Still others offered the responses, "I had to." or "...it was the only job left or available."

Generally, the responses displayed a negative connotation to working in a manufacturing job. In reviewing the responses to the second statement, "The following classes would help me to pursue a manufacturing career...," it was an easy conclusion to draw that the students did not necessarily have a clear understanding of what a manufacturing career actually entailed.

Many students knew of no classes that could help them. Others responded with "computer classes," giving at least a glimmer of understanding. Some felt that courses in the industrial education department could get them on their way. Still, others suggested courses such as "child care lab," "art," and "secretarial."

Thankfully, there were quite a few students who listed "CAD lab," "welding," "drafting," "electronics," "math," and "electricity." And, one student presented the possibility that English might even be helpful! —(Good!)

When asked to complete the third statement, "I was informed about opportunities in manufacturing by...," almost half of the students responded that no one had

informed them. Three students stated that the survey itself was the first source of information they had received about this field. Clearly, this omission in career choices must be addressed.

However, on the bright side, many of the remaining responses named teachers, counselors, and family members as their sources of information. In reviewing the previous responses, it appeared that even though these respondents had some knowledge about the manufacturing field, their desire to enter it was minimal.

The full range of these responses demonstrates the necessity for more intensive introduction to the current students about the manufacturing field. The responses also validate the importance of the TECH PREP Design Teams' efforts.

The most obvious areas which need to be stressed to the students are

1. the actual jobs available in the manufacturing field
2. the high school and post-high school courses that are available to them
3. the fact that both men and women are needed in this field
4. the true working conditions and management expectations for most manufacturing jobs
5. exactly how the manufacturing field has changed in the past twenty years

There appears to be a rather negative attitude toward the manufacturing field pervasive throughout the responses to this survey. The education system and the manufacturing

businesses must come together to reverse this attitude.

More career speakers must be brought into the schools, beginning as early as 7th grade and as often as possible in all disciplines. Career conferences held in both high and middle schools would be most beneficial. School counselors must be allowed the time to effectively counsel students about career opportunities rather than simply scheduling the students for tracted couses. Greater inclusion of CEANCI's services must also be developed and utilized.

We simply cannot allow our students to pass through twelve years of formal education without informing them as completely as possible of every opportunity available to-- them upon graduation. The schools must endeavor to remove the negative stigma associated with "industrial" and/or "vocational" education.

There are not enough non-skilled jobs with little responsibility remaining in today's society for businesses and schools to ignore the need for comprehensive career education.

Of the 24 former students contacted to respond to the TECH PREP survey, only two were currently in the manufacturing field. The others did not have an interest in the field or, once again, had misconceptions about the actual jobs.

One responded to the first question, "I would have considered a career in manufacturing if...," "I were male." Another said, "...I couldn't find anything else." Another,

"... I was desperate." This clearly shows the need for better public relations on the part of the businesses involved in this field.

In analyzing the responses to the second question, the case can be made that if the information was made more readily available through the schools, more students might enter the manufacturing field. It appears that the sooner information is made available to students,the sooner they would be able to consider careers in manufacturing as viable and appealing.

An interesting response by one of these former students presents a unique angle which should be addressed and expanded upon by both educators and busineses who are interested in pointing more students toward a career in the manufacturing field. The student said that she would have considered a career in this field if she felt she would be doing something to help change the world.

The question which comes to mind is, "What field, other than manufacturing, has changed the world more?!" Perhaps the U.S. history teachers need to focus more time on the Industrial Revolution!

It is imperative that regardless of the subject taught by an educator, he must become creative in his classroom and allow time for career exploration. English, science, mathametics, or foreign language are so important for today's employee that manufacturing careers could easily be discussed in all disciplines.

TECH PREP -- **SURVEY RESULTS,**
ROCK VALLEY COLLEGE

The purpose of this survey is to establish reasons that Rock Valley College students choose not to pursue manufacturing-based curriculums. Forty-seven currently or newly-enrolled students were randomly selected to complete the survey instrument.

The following is a summary of the results of the RVC survey:

1. Ninety-eight percent of the respondents indicated that they were not in a manufacturing career path.
2. Slightly more females were surveyed than males.
3. The majority of the respondents "slightly disagree" that manufacturing careers offered the level of prestige that they desired.
4. The majority "slightly agree" that their parents encouraged them to look at careers other than manufacturing. However, there was a large variance on this question.
5. The majority "slightly agree" that pay in manufacturing careers would support their desired lifestyles.
6. The majority "slightly agree" that manufacturing careers offer unpleasant or unhealthy working conditions.
7. The majority "slightly disagree" that they were not made aware of opportunities in manufacturing, but again there was a large variance in the responses.

8. The majority "slightly agree" that job security was uncertain.
9. The majority "slightly disagree" that the skills required in this field were beyond their ability.
10. The majority "slightly agree" that high school coursework did not prepare them for a manufacturing career. (As with questions 4, 10, and 11, there was a large variance in responses.)
11. The majority "slightly disagree" that their peers influenced their career choice.
12. The majority "slightly agree" that manufacturing careers did not interest them at the time of their high school graduation.

RVC students were also asked to respond to an open-ended question. The following is a summary of their responses:

1. I would have considered a career in manufacturing if...
   - 30% said they were not interested
   - 10% wanted to know more about it
   - 6% wanted better pay and a more challenging career than what they perceived manufacturing careers to offer
   - 6% had never given prior thought to career opportunities in manufacturing

(The remainder of the responses dealt with greater job security, more potential for advancement, and more "influential" occupations than which might be offered in manufacturing careers.)

2. The biggest impact on my career choice was...

The predominant factor was personal interests and abilities, followed distantly by family preferences and pay. Each of the following responses appeared only once:

religion
aptitude
health
educational costs and opportunity
hours
stress factors
local opportunities
previous bad experience in factory work
high school classes and emphasis
own career research
not sure
desire to help others

This survey seems to indicate that students were not informed and have developed negative impressions about manufacturing careers. More effort needs to be directed toward making parents and students aware of the wide variety of career opportunities available in manufacturing.

RVC Tech Prep participants:

Randy Barnhart

Diane Koenig

Jerry Frang

Larry Murphy

Dave Bloomstrand

CUMULATIVE RESULTS

07:40

CUMULATIVE CURRENT

CUR=.

VARIABLE	N	MEAN	STD DEV	MINIMUM	MAXIMUM	VARIANCE
A1	256	1.4844	0.5007	1.0000	2.0000	0.2507
A2	258	3.0930	1.0131	1.0000	4.0000	1.0263
A3	258	1.9109	1.0713	1.0000	4.0000	1.1477
A4	258	2.6318	1.0513	1.0000	4.0000	1.1051
A5	258	2.6202	1.1749	1.0000	4.0000	1.3804
A6	257	2.6965	1.0123	1.0000	5.0000 *(2)	1.0247
A7	256	3.3789	0.9080	1.0000	5.0000 *(3)	0.8245
A8	257	2.1167	0.8581	1.0000	4.0000	0.7363
A9	258	2.9729	1.0189	1.0000	4.0000	1.0382
A10	258	1.8217	0.9579	1.0000	5.0000 *(1)	0.9175
A11	257	1.9222	0.8715	1.0000	4.0000	0.7595
A12	163	1.8528	0.8551	1.0000	4.0000	0.7313
A13	257	1.6770	0.7761	1.0000	4.0000	0.6023
A14	254	2.4016	0.9090	1.0000	4.0000	0.8262
A15	255	1.9569	0.8477	1.0000	4.0000	0.7186
A16	247	1.7449	0.8529	1.0000	4.0000	0.7274

07:40

CUMULATIVE ALUMNI

CUR=1

VARIABLE	N	MEAN	STD DEV	MINIMUM	MAXIMUM	VARIANCE
A1	146	1.8904	0.3135	1.0000	2.0000	0.0983
A2	146	1.5685	0.5742	1.0000	4.0000 *(4)	0.3298
A3	144	2.8750	0.9886	1.0000	4.0000	0.9773
A4	146	2.6301	1.2704	1.0000	5.0000 *(5)	1.6140
A5	146	2.3493	1.0992	1.0000	4.0000	1.2082
A6	146	2.5479	1.0177	1.0000	4.0000	1.0356
A7	146	2.8493	1.1647	1.0000	4.0000	1.3564
A8	144	2.2778	0.9996	1.0000	4.0000	0.9992
A9	146	3.2877	0.9682	1.0000	5.0000 *(6)	0.9374
A10	145	2.1034	1.1806	1.0000	4.0000	1.4128
A11	146	3.1370	1.0546	1.0000	5.0000 *(7)	1.1121
A12	143	1.6084	1.0617	1.0000	4.0000	1.1273
A13	0	.	.	.	.	.

Footnotes

1. Two people responded E
2. Three people responded E
3. One person responded E
4. Two people responded D
5. One person responded E
6. One person responded E
7. One person responded E

Corrected Data for 1 thru 7

	N	MEAN	STD DEV	MIN	MAX	VARIANCE
1.	255	2.7121	0.9994	1	4	0.9988
2.	253	3.3490	0.9030	1	4	0.8154
3.	257	1.8147	0.9446	1	4	0.8923
4.	144	1.5208	0.4996	1	4	0.2496
5.	145	2.6138	1.2439	1	4	1.5474
6.	145	3.2690	0.9631	1	4	0.9277
7.	145	3.1241	1.0562	1	4	1.1156

JEFFERSON

07:3

JEFFERSON CURRENT
ALUCUR=1

VARIABLE	N	MEAN	STD DEV	MINIMUM	MAXIMUM	VARIANCE
A1	50	1.5000	0.5051	1.0000	2.0000	0.2551
A2	52	3.4038	0.7985	1.0000	4.0000	0.6376
A3	52	1.9038	0.9754	1.0000	4.0000	0.9514
A4	52	2.6731	1.1669	1.0000	4.0000	1.3616
A5	52	2.5385	1.2904	1.0000	4.0000	1.6652
A6	52	2.6346	0.9707	1.0000	4.0000	0.9423
A7	52	3.2500	0.9048	1.0000	4.0000	0.8186
A8	51	1.8039	0.8490	1.0000	4.0000	0.7208
A9	52	3.0577	0.9983	1.0000	4.0000	0.9966
A10	52	1.6154	0.9321	1.0000	4.0000	0.8688
A11	52	1.7115	0.8480	1.0000	4.0000	0.7191
A12	51	1.7647	0.8623	1.0000	4.0000	0.7435
A13	52	1.6346	0.8408	1.0000	4.0000	0.7070
A14	52	2.3846	0.9529	1.0000	4.0000	0.9080
A15	51	1.8824	0.8865	1.0000	4.0000	0.7859
A16	51	1.6471	0.8444	1.0000	4.0000	0.7129

07:37

JEFFERSON ALUMNI
ALUCUR=1001

VARIABLE	N	MEAN	STD DEV	MINIMUM	MAXIMUM	VARIANCE
1	22	1.8182	0.3948	1.0000	2.0000	0.1558
2	22	1.5455	0.9117	1.0000	4.0000	0.8312
3	22	2.6818	0.9946	1.0000	4.0000	0.9892
A4	22	3.0455	1.2141	1.0000	4.0000	1.4740
A5	22	1.9545	1.1742	1.0000	4.0000	1.3788
A6	22	2.6818	1.2105	1.0000	4.0000	1.4654
A7	22	3.5000	0.9129	1.0000	4.0000	0.8333
A8	22	2.4091	1.2968	1.0000	4.0000	1.6818
A9	22	3.4091	1.0075	1.0000	4.0000	1.0152
A10	22	2.1364	1.2450	1.0000	4.0000	1.5519
A11	22	3.0455	1.2902	1.0000	4.0000	1.6645
A12	19	1.4211	1.0174	1.0000	4.0000	1.0351
A13	0	.	.	.	.	.
A14	0	.	.	.	.	.
A15	0	.	.	.	.	.
A16	0	.	.	.	.	.

ATTACHMENT C

ARTICULATION AGREEMENTS:

-Winnebago High School
-Jefferson High School

ROCK VALLEY COLLEGE
CAREER EDUCATION ASSOCIATES of NORTH CENTRAL ILLINOIS

Rock Valley College (RVC) and Career Education Associates of North Central Illinois (CEANCI) High Schools are committed to preparing students for employment in an effective efficient manner. Program articulation agreements between RVC and CEANCI schools will improve the secondary and post-secondary education delivery systems and allow students to accelerate their programs at Rock Valley College. If the articulation agreement policies are followed, high school graduates may receive College credit or advanced placement for high school competencies related to a specific Rock Valley College Vocational-Technical Education program.

This agreement is between Rock Valley College and Winnebago High School high school for Rock Valley College's Computer Aided Design Technology program.

The effective date of this agreement is _____, 199__.

AGREEMENT REQUIREMENTS:

1) Students must complete all College admission requirements before being admitted to the articulated College program.

2) In order for articulated credit to be granted, the student must enroll in Rock Valley College's articulated program within 18 months following high school graduation.

3) College credit for high school articulated courses will be granted after the student has completed twelve hours of "A", "B", or "C" College course work in the articulated program. The student may be required back to lower level courses if he/she fails to make satisfactory progress in the next higher course. Students who have passed the College Board Advanced Placement (AP) Examination may receive credit for College courses. Refer to the RVC Catalog for AP credit.

4) If a student has previously received College credit for AP or articulated courses/s by having enrolled in the course/s or passing the AP test, the grade will stand and proficiency or test credit will not be given.

5) Either educational institution may terminate the agreement. After written notice from RVC or the CEANCI high school, the agreement will be terminated on July 1 after the termination notice is received.

6) Amendments or revisions to the agreements may be made at any time by mutual consent of both education units.

ARTICULATED COURSES FOR CREDIT:

Winnebago High School — Rock Valley College

Course/s	Grade Standard	Courses
1) Draft I/CAD I	B	CDT-100
2) Trig & Adv Math	B	Tech Math III-MTH 153 Plane Trigonometry-MTH-125
3) Computer Concepts & Computer Science I	B	CSC-102

SPECIAL REQUIREMENTS:

1) Drafting I/CAD I or subsequent course must be taken within 2 years of admittance to Rock Valley College.

2) Credit for MTH-153 or MTH-125 will be granted if the student passes a proficiency exam at Rock Valley College.

3) Credit for CSC-102 will be granted if the student passes a proficiency exam at Rock Valley College.

AUTHORIZATION SIGNATURES:

RVC Division Director

Program Director

RVC Dean Vocational-Education

Principal

RVC President

Superintendent

Date

Date

Winnebago High School

Recommended Curriculum Guidelines
for
COMPUTER AIDED DESIGN TECHNOLOGY

SUBJECT	GRADES 9th	10th	11th	12th
English	English 9	English 10	Jr. English	Senior English
Math	Algebra I	Algebra II	Geometry	Adv. Algebra 7 Trigonometry
Science	Physical Science	Biology	Chemistry	Physics
Social Science	Wld. History	Am. Gov't	U.S. History	Political Iss.
Other	Health	Driver Ed.	Manufact. I	Manufact. II
Technical Emphasis	Ill Plan for Ind. Tech.	Draft I/ CAD I	Draft/CAD II	Arch. Draw
Related Technical	Keyboard. I	Computer Concepts	Computer Science I	

ROCK VALLEY COLLEGE
CAREER EDUCATION ASSOCIATES of NORTH CENTRAL ILLINOIS

Rock Valley College (RVC) and Career Education Associates of North Central Illinois (CEANCI) High Schools are committed to preparing students for employment in an effective efficient manner. Program articulation agreements between RVC and CEANCI schools will improve the secondary and post-secondary education delivery systems and allow students to accelerate their programs at Rock Valley College. If the articulation agreement policies are followed, high school graduates may receive College credit or advanced placement for high school competencies related to a specific Rock Valley College Vocational-Technical Education program.

This agreement is between Rock Valley College and Rockford Jefferson H.S. high school for Rock Valley College's Automated Manufacturing Technology- #7900 program.

The effective date of this agreement is _____, 199__.

AGREEMENT REQUIREMENTS:

1) Students must comp te all College admission requirements before being admitted to the articulated College program.

2) In order for articulated credit to be granted, the student must enroll in Rock Valley College's articulated program within 18 months following high school graduation.

3) College credit for high school articulated courses will be granted after the student has completed twelve hours of "A", "B", or "C" College course work in the articulated program. The student may be required back to lower level courses if he/she fails to make satisfactory progress in the next higher course. Students who have passed the College Board Advanced Placement (AP) Examination may receive credit for College courses. Refer to the RVC Catalog for AP credit.

4) If a student has previously received College credit for AP or articulated courses/s by having enrolled in the course/s or passing the AP test, the grade will stand and proficiency or test credit will not be given.

5) Either educational institution may terminate the agreement. After written notice from RVC or the CEANCI high school, the agreement will be terminated on July 1 after the termination notice is received.

6) Amendments or revisions to the agreements may be made at any time by mutual consent of both education units.

ARTICULATED COURSES FOR CREDIT:

Rockford Jefferson High School — Rock Valley College

	Course/s	Grade Standard	Courses
1.	Tech Prep Math 2	B	MTH 153 - Technical Math III
2.	Completion of Tech Prep Machine Tool Technology Program	B	AMT 121 - Fundamentals of Numerical Control

SPECIAL REQUIREMENTS:

1. Prerequisites will be waived upon earning a B or better in Tech Prep Math 2 and passing a proficiency exam at Rock Valley College and credit for MTH 153-Technical Math III will be granted after completion of the Automated Manufacturing Technology #7900 program.

AUTHORIZATION SIGNATURES:

_____ RVC Division Director

_____ Program Director

_____ RVC Dean Vocational-Education

_____ Principal

_____ RVC President

_____ Superintendent

_____ Date

_____ Date

ROCK VALLEY COLLEGE
CAREER EDUCATION ASSOCIATES of NORTH CENTRAL ILLINOIS

Rock Valley College (RVC) and Career Education Associates of North Central Illinois (CEANCI) High Schools are committed to preparing students for employment in an effective efficient manner. Program articulation agreements between RVC and CEANCI schools will improve the secondary and post-secondary education delivery systems and allow students to accelerate their programs at Rock Valley College. If the articulation agreement policies are followed, high school graduates may receive College credit or advanced placement for high school competencies related to a specific Rock Valley College Vocational-Technical Education program.

This agreement is between Rock Valley College and Rockford Jefferson H.S. high school for Rock Valley College's Computer-Aided Mechanical Design Technology-7700 program.

The effective date of this agreement is _____, 199__.

AGREEMENT REQUIREMENTS:

1) Students must complete all College admission requirements before being admitted to the articulated College program.

2) In order for articulated credit to be granted, the student must enroll in Rock Valley College's articulated program within 18 months following high school graduation.

3) College credit for high school articulated courses will be granted after the student has completed twelve hours of "A", "B", or "C" College course work in the articulated program. The student may be required back to lower level courses if he/she fails to make satisfactory progress in the next higher course. Students who have passed the College Board Advanced Placement (AP) Examination may receive credit for College courses. Refer to the RVC Catalog for AP credit.

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6) Amendments or revisions to the agreements may be made at any time by mutual consent of both education units.

ARTICULATED COURSES FOR CREDIT:

Rockford Jefferson High School — Rock Valley College

	Course/s	Grade Standard	Courses
1.	Tech Prep Math 2	B	MTH 153 - Technical Math III
2.	Engineering Graphics 3-4	B	CDT 133 - Computer Graphics I

SPECIAL REQUIREMENTS:

1. Prerequisites will be waived upon earning a B or better in Tech Prep Math 2 and passing a proficiency exam at Rock Valley College and credit for MTH 153-Technical Math III will be granted after completion of the Computer-Aided Mechanical Design Technology #7700 program.

AUTHORIZATION SIGNATURES:

RVC Division Director	Program Director
RVC Dean Vocational-Education	Principal
RVC President	Superintendent
Date	Date

JEFFERSON HIGH SCHOOL
TECH PREP

Recommended program for articulation with Rock Valley College

1. Automated Manufacturing Technology #7900
2. Computer-Aided Mechanical Design #7700

freshman	sophomore	junior	senior
English 1-2	English 3-4	English 5-6	Tech Prep English 7-8
Fundamental Algebra 1	Fundamental Algebra 2	Tech Prep Math 1 emphasis on: -int. algebra - geometry -trigonometry	Tech Prep Math 2 emphasis on: - algebra -probability - statistics
General Science	Biology	Chemistry	Tech Prep Physics
*	*	U.S. History	Government-Economics
P.E. - Health	P.E. - Driver Ed	P.E.	P.E. or P.E. exemption *
* Computer Keyboarding	Orientation to Production or	Machine Tool Technology 1-2 (2 credits) or	Machine Tool Technology 3-4 (2 credits) Engineering Graphics 3-4 (2 credits)
	Orientation to Drafting	Engineering Graphics 1-2 mechanical (2 credits)	Computer-Aided Drafting Industrial Co-op: D.O. (2 credits)

* Electives

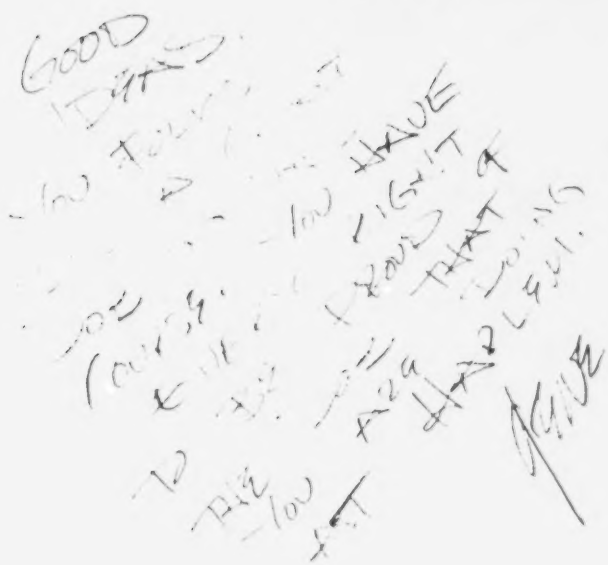
ATTACHMENT D

IMPLEMENTATION PLAN

-Harlem High School
-Winnebago High School

Implementation Plan: Recommendations
Barriers
CEANCI Support

Harlem High School
Carol Falzone
Dan Lang
Ellen Letourneau
Bill Rosecrance
Tom Yoe



TECH PREP Design Team
Implementation Plan

The following items will be recommended to the principal at Harlem High School. It is the desire of the team members that all of these items be instituted and integrated into the Planning Report of the high school no later than August, 1992.

RECOMMENDATIONS:

1. All sophomores will be required to utilize the Discover Program.

2. Introduction to Occupations shall be made a requirement for all sophomores.

3. A Vocational and/or Technical Writing Class will be created which could be integrated with the Introduction to Occupations course.

4. A Career Speakers Program for grades K-12 will be developed and these speakers will be made readily available to the district teachers.

5. A new TECH PREP Design Team will be formed.

6. A link must be created between academic classes and industrial education classes, i.e. housing a math and/or an English class in the Industrial Education wing of the building.

7. The feasibility of a team teaching approach with industrial education, English, mathematics, and science shall be investigated.

8. A Career Counselor shall be employed.

9. A Conceptual Physics class(es) shall be created. (APPROVED)

10. More student/teacher discussion about recommendations for further study for individual students will take place.

11. Tech Prep information about learning styles will be integrated into present programs by presentations to faculty during the August Institutues by present Tech Prep Design Team members using their Integrated Lesson Plan or another plan which will be created for that institute.

12. Departmental tours to industry, i.e. Sundstrand, which will concentrate on that discipline will be organized.

13. The state mandate on career units in each course will be enforced.

14. A parent orientation about Tech Prep will be organized and implementated.

15. Students enrolled in mathematics courses will be required to purchase and use scientific calculators.

16. All faculty members will be instructed in the use of the Discover Program in an effort to become more familiar with careers in today's society.

17. A concentrated effort will be made to integrate courses in the existing curriculum rather than creating new, isolated courses.

BARRIERS:

1. Parental resistance and misunderstanding of the program
2. Peer pressure felt by students about Tech Prep
3. District finances
4. Teacher reluctance and/or lack of knowledge of TechPrep
5. Daily time constraints
6. Class sizes
7. Communication
8. Layout of the high school building
9. Teacher scheduling

CEANCI SUPPORT:

1. Nominal funds which could help impact Tech Prep within Harlem High School which cannot be funded because of school's lack of district finances
2. Help facilitate donation of outdated industrial materials and equipment to the high school
3. Help arrange special tours of industry for our students

4. Provide resource meeting time for present team members by covering the cost of substitutes

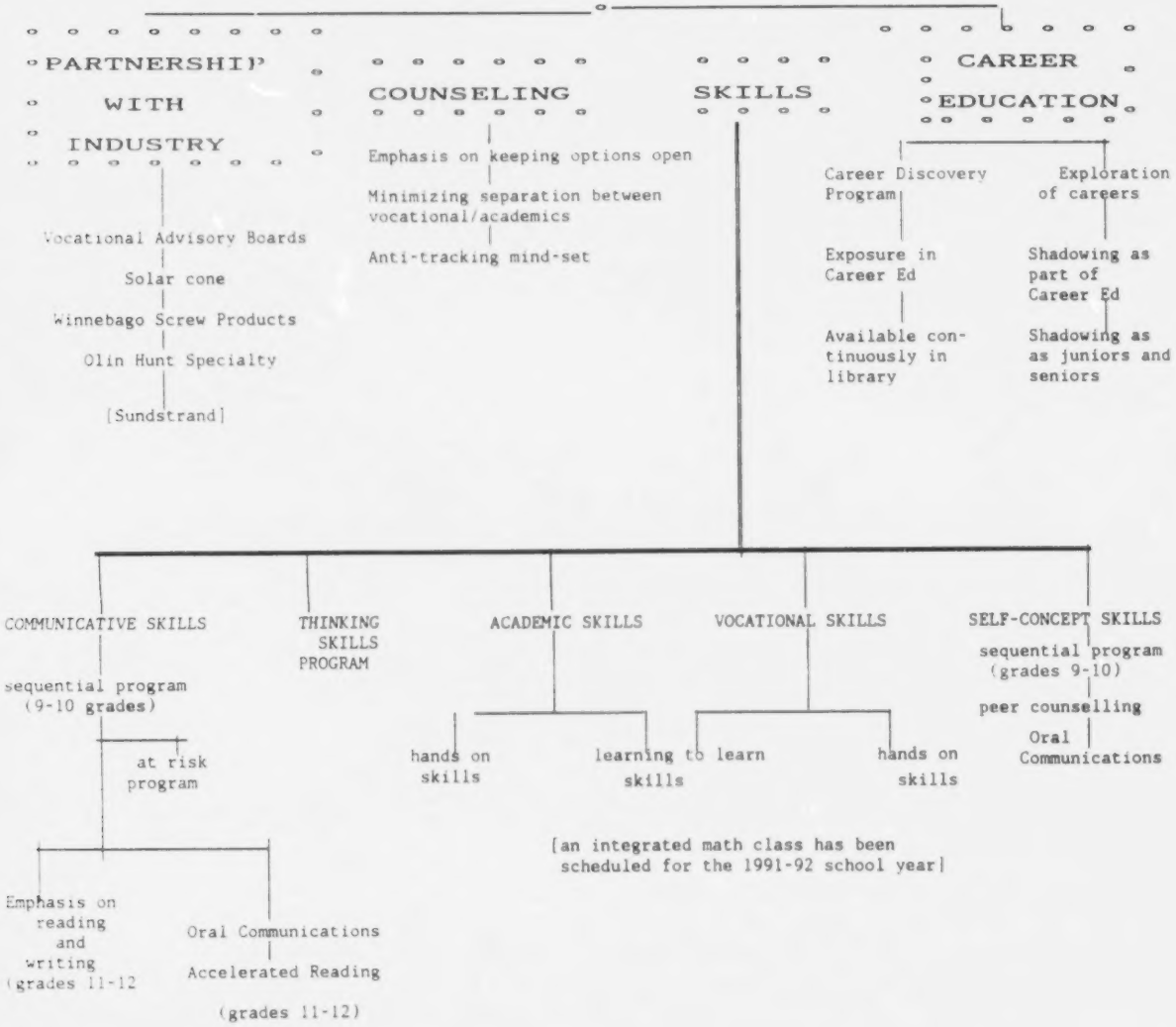
5. Keep present Tech Prep members abreast of pertinent research, conferences, and programs which are successful and could be made available to all schools in this Tech Prep Design Team

THE UMBRELLA

TEACHERS FUNCTION AS A UNIT

TEAMING PROCESS AMONG TEACHERS WITHIN DISCIPLINE

EMPHASIS ON TEACHING STUDENTS--NOT SUBJECTS



winnebago high school existing program

Tech Prep potential

ATTACHMENT E

PROGRAM EVALUATION

-Evaluation Survey
-Evaluation Results
-Tech Prep Journal
by E. Johnson

TECH PREP EVALUATION

1. What should be done at the beginning of this course to help participants (teachers) gain an understanding of Tech Prep?

2. Please rate the value of the following topics covered in this course (1 = lowest value to 5 = highest value)

Team Building	1	2	3	4	5
Cooperative Learning	1	2	3	4	5
Integrated Curriculum	1	2	3	4	5
4-MAT Lesson Planning	1	2	3	4	5
Articulation Agreements	1	2	3	4	5
Apprenticeship	1	2	3	4	5
Problem Solving	1	2	3	4	5
Performance Standards (Bob Sheets)	1	2	3	4	5
Industry Tours	1	2	3	4	5

3. What topics should we add to this beginning Tech Prep course next time, for people that may be starting next year?

4. Roth gave you a bunch of handouts (structured exercises, etc)--were these of value to you or should we save the trees?

5. We tried to treat you folks special (good food, good tours, free graduate credit, mileage reimbursement, and stipends). How did we succeed?

6. How would you rate this course with other professional development courses you have taken?

7. What are (or should be) the most practical and meaningful assignments for this course?

8. What can be done to make the tours most beneficial to participants? Should there be more tours?

9. What can be done to improve our time spent with guest speakers? Should we spend more time with business and industry representatives?

10. Any general ideas on how this could have been a more profitable experience for you?

11. Over all---what did you like the most?

12. Over all---what did you dislike the most?

13. What is needed next year to offer you the support to make Tech Prep a reality in your school?

14. Would you care to make a general comment about Gene Roth's car?

TECH PREP EVALUATION

1. What should be done at the beginning of this course to help participants (teachers) gain an understanding of Tech Prep?

Develop a definite definition of what exactly Tech Prep is. (21)

Clarify the ties needed between schools & industries.

Start with industry tours.

Use as many statistics as possible to show the need for a more technical workforce. Talk about lifelong learning and the ability to adapt to change. Afterwards, show how TP attempts to meet those needs.

Shorten the presentations.

Examples from other locations.(2)

Be sure that all people attend 1st meeting.

Bring in someone from a school district currently using "Tech Prep" to explain their successes, failures, and answer questions about starting & implementing TP.

Clarify the sessions content with goal accomplishment.

Invite Bob Sheets to make a presentation. That helped me alot. (3)

2. Please rate the value of the following topics covered in this course (1 = lowest value to 5 = highest value)

	1	2	3	4	5
Team Building	0	4	7	**11**	9
Cooperative Learning	1	6	9	**12**	4
Integrated Curriculum	2	2	9	**14**	4
4-MAT Lesson Planning	3	**10**	7	7	3
Articulation Agreements	1	4	7	10	**10**
Apprenticeship	0	1	4	12	**14**
Problem Solving	0	1	11	**13**	7

Performance Standards	2	1	**13**	5	10
Industry Tours	0	0	1	5	**25**

3. What topics should we add to this beginning TP course next time, for people that may be starting next year?

12 blanks

More structured directions.

What is TP? (4)

Cooperative learning needed more time.

Brief overview in statistical inferences to help with the interpretation of the survey results.

Expand into global competition more, show what Japan and other countries are up to.

Make sure that the CEANCI people are in the room during the class sessions so they actually know what's going on--expectations, frustrations, questions, comments.

More meetings between the school team and the industry consultant. (2)

Reduce time on Team Building and 4-MAT.

Methods to integrate academic/vocational curriculums. More brainstorming and ways to promote team teaching or simultaneously teaching curriculum across fields.

Put a computer member on the team and emphasis of computer useage in manufacturing, math, science, and English courses.

Reduce the time spent on tehory and spend more time on the practical aspects.

Meetins with workers describing what they do and what skills they have.

4. Roth gave you a bunch of handouts (structured exercises, etc)--were these of value to you or should we save the trees?

Be more selective - (a few)

Some were good, some were not.(a few)

Save the trees.(most)

5. We tried to treat you folks special (good food, good course, free graduate credit, mileage reimbursement, and stipends). How did we succeed?

Most answers were all great, wonderful, excellent.

I felt the grant money would have been better spent setting up a fund at each school with money used for textbooks, tapes, curriculum, or travel. Pay for the class; plus smaller stipend--remaining money goes for start up costs at the school.

Comfortable environment.

Fantiastically! Food and snacks were great, the money was fantastic and a great incentive as I didn/t need the credit. We could use more industry tours.

6. How would you rate this course with other professional development courses you have taken?

Lack of direction, felt the leaders were hiding things from us, of course that is typical.

Concept good, presentations could be shorter.

Better than most.

Par (a few)

Good, but could be more focused. (several)

Best I have taken.

Rather disorganized.

Average to above, but consolidate, arrange better time frames.

Considering nebulas nature of the topic this course was challenging (to say the least).

Very good.(a few)

Well taught, sometimes too broad, same as most grad courses.

Better than usual in useful hands on practical applications.

Lots of good ideas, not always a lot of continuity.

Much better than most, because of the application to help our kids. At least the potential is there.

Exciting, fun, too much wasted time, however.

Adventurous

Very useful and practical as far as industry tours and doing specific lesson plans.

7. What are (or should be) the most practical and meaningful assignments for this course?

Survey (6)

Articulation (7)

Meeting with industry (10)

Integrating Curriculum. (3)

Lesson Plan Implementation (13) but not necessarily 4-MAT
4-Mat but with less theory (3)

Apprenticeship (1)

Communications between schools and local industry.

4-MAT concept "not the lecture"

Things that relate directly to our school.

Lesson plans that we have used. Papers - opinion papers.

Team building, cooperative learning, integrating into several classes.

Working with the other team members to integrate our disciplines is very valuable. I wish we had had more time for this.(2)

Assignments were necessary for a grade, but what is most important is how I implement the ideas and change procedure ir the classroom.

Guest speakers from successful "Tech Prep" programs.

8. What can be done to make the tours most beneficial to participants? Should there be more tours?

More tours (18)

Smaller Companies (6)

Tours each day.

Keep tours limited to a TP focus.

Perhaps trying to match up tours to personal preferences. I toured 3 industries I had toured before.

Include information on job opportunities for our kids and earning potentials & job security.

Make sure businesses are aware that continuous walking, sitting reaches a saturation point, at least one break would be nice.

Teachers grouped by subject area was terrific. It would have been good to have been together as a math team earlier.

Perhaps work on outline industries were supposed to cover during discussion.

Discussion with people who do the actual work in the shop, not always managers. Focus on skills needed.(5)

Relate tours to the disciplines being guided.

More tours - take the best of the ones and have everyone go.

To make it more beneficial, please explain what each industry does before we go on tours.

More time for questions and discussion.

9. What can be done to improve our time spent with guest speakers? Should we spend more time with business and industry representatives?

More time with business and industry representatives yes (12) no (2). More time for questions and discussion.(2)

Explore internship possibilities, industry people visiting schools!(3)
Don't let Don Morrison in any door.

1 day with Don Morrison would be enough. Bob Sheets was very good.

Background on speaker & industry representative prior to sessions so team members will have time to formulate questions.

More time should be spent with industry representatives who actually want apprenticeship programs.

Need more group time with industry representative, especially the one assigned to your team who might be willing to come into the classroom. (2)

Tap Rockford's smaller businesses also. (2)

10. Any general ideas on how this could have been a more profitable experience for you?

Very profitable for me! More time with business and industry would be great.

Several wanted more industry involvement - panel discussions.

Brainstorming - coping with group changes and implementing TP.

Several wanted less time on cooperative learning and 4-MAT

Several wanted shorter presentations.

More money, more idea people like Judy. More cutting edge people like Bob Sheets. Put RVC person with each H.S. team.

I am not sure that it could be.

Less time on team building & more work on building plan.

Keep recording us along the way how each step we learn will help us help our kids!

More vision - more clarity from beginning where we are going.

More time needed to be allowed to work on the deliverables during the Spring session.

Not have class 1-8 too long!(2)

We needed more time to work and to do it before the end of class.

More organized.

A lot of time was wasted during Team Building/Coop learning/4-MAT. More direction about projects was needed.(2)

Less time out of school.

More tours related to my subject area.

Clearer assignments.

11. Over all---what did you like the most?

Tours and interaction with industry (18)

Credit (5)

Articulation (2)

Problem solving

Working with participants from other schools (5)

Instructor - Gene Roth (5) also his humor

Learning 4-MAT

Meals (7)

Money

Professional, problem solving attitude of the group and Gene Roth, Don Johnson and Julie Nichols.

The hope that all this effort will help our kids.

Liaison made between the high schools, RVC and industry.

Really enjoyed the overall idea of doing something for the "kids in the middle". Stimulating in many ways.

Lunch - hmm. The chance to see the Real World, not from behind a desk.

Bob Sheets (2)

RVC facilities.

I appreciated the flexibility, mistakes are adjusted and corrected.

German speakers.

12. Over all---What did you dislike the most?

Length of classes (15)

4-MAT (13)

Bad attitudes from participants (3)

Don Morrison (3)

Disorganization - Lack of Direction (3)

Courses attempting to teach experienced teachers how to teach.

Meeting from 4-8 & 1-8 - why not 9-5?

Cooperative learning.

13. What is needed next year to offer you the support to make TP a reality in your school?

Planning time with other teachers in my school to team teach.

Money, liaison between schools, RVC & industry, equipment, meeting time when necessary. (4)

Administrative support.(several)

This program needs to be given to a school team of teacher, administrator, school board, and community members. Some pressure from Julie to the administration to look into scheduling of students and teachers into the program.

Continuation of current teams--meet several times during the year.

Cooperation from the staff.

A continuation of this type of course with the majority of time spent on integrating curriculum and lesson plans.

Articulation, tours/speakers.

Continued backing from Julie.

Current teams should meet as a group once or twice next year for support and to find out what is happening at each school. (a few)

Availability of industrialist for speaker and possible money for 4-MAT session.

Common planning time, shared class participants.

Industry representatives make presentation to school board.

Staff may need to demand combination time for cooperative teachers, especially for lesson preparation. (a few)

Strengthen and approve the articulation agreement.

I'm sold - now my administration must be.(2)

Sources of supplies and suppliers to use in teaching the class.
Curriculum, computers, equipment.

14. Would you care to make a general comment about Gene Roth's car?

Gene's car has great possibilities - all he needs is 5 gallons of Bondo and a case of duct tape.

The shoe fits.

No, ...but he should buy a smaller car so he doesn't have to carry so much dead tree material.

No, but I thought Gene was an extremely gifted lecturer.

Too bad it's a Ford.

I live in a glass house.

A fashion statement of the 90's.

Rust never sleeps.

A true classic manufactured in America.

It's neat!!! (Do I get another "A"?)

I like Gene Roth.

Wow!

I've been told it's a classic--don't actually understand that term, but I will go with it. Gene, I feel you did a tremendous job with a very disorganized and mismanaged course!

I appreciated your sense of humor.

Several fastener businesses would be willing to help.

Couldn't care less.

The Handy-Dandy PMI Sheet
Tech Prep Journal by E. Johnson
November 29, 1990

Description of meeting.

The introductory meeting for Tech Prep teams, administrators, and Tech Prep advisory council members. A series of slides describing TP was shown, along with speakers telling the "What, Where, When, Why, and How's" of TP.

Plus

Clarified the "What, Where, When, Why, and How's" of TP mission.

TP advisory council member, John Mink, gave an excellent marketing plan and rational for TP.

Minus

A very vague explanation of where TP is headed and how the group is going to get there.

Interesting

No "meat" to anything yet.

Hey Roth, this was great stuff!

Yeh Nah Eh XXX

The Handy-Dandy PMI Sheet
Tech Prep Journal by E. Johnson
December 13, 1990

Description of meeting.

A meeting at Ingersoll Milling Machine Company where TP team members toured the plant and listened to company engineers and manufacturing persons explain what skills, attitudes, and qualities Ingersoll, as well as industries in general, look for in employees. We heard about changes in the workplace and how education needs to teach students able to handle these changes.

Plus

Awareness of large, modern manufacturing environment.
Hear first-hand from business people what manufactures are looking for in workers and needing of public education.

Minus

Heard what manufactures what from education but little said about how education and businesses can work together to mutually accomplish this.

Interesting

Manufactures are looking for students with very high academic and worker attitude abilities; very few of these "type" of students are interested in manufacturing careers.

Hey Roth, this was great stuff!

Yeh xxx Nah Eh

The Handy-Dandy PMI Sheet
Tech Prep Journal by E. Johnson
January 10, 1991

Description of meeting.

Team building exercises and information on how team dynamics work. Don Morrison and Michelle Sibigtroth from the Educational Service Center went over ways to develop interpersonal skills which facilitate group processes.

Plus

Even though individuals in our school's group knew one another, we became a much more conesive group and learned to work better as a group.

Discussed the worst meetings we have been at and what made them such. Brainstormed ways to handle problems in the areas of meeting management, group skills, and interpersonal skills.

Minus

No one explained how these team building exercises and information related or was of use to the TP initiative.

Some in group were very knowledgeable in these activities, so they felt bored and questioned the worth of these activities.

Interesting

See our group dynamics and conesiveness grow because of very basic group building activities.

Learned about ways to establish rules within a group to facilitate reaching goals and promoting harmony.

Rules laid out for TP group processes were time, participate, confidentiality, no sidetracking, and no bird walking.

Hey Roth, this was great stuff!

Yeh xxx Nah Eh

The Handy-Dandy PMI Sheet
Tech Prep Journal by E. Johnson
January 24, 1991

Description of meeting.

1-4 P.M. More team building discussion and exercises.
5-8 P.M. A panel of industrial personnel outlined how their manufacturing firms used teams in the workplace and how these companies went about developing the teamwork abilities of employees.

Plus

Learned the ABCD's of group destruction and ways to cope with these. Discussion was guided, yet very open to questioning and group input, which helped establish a sharing and participatory atmosphere for all TP discussion in following meetings.

Industry panel was very good, real eye opener as to what is happening in regards to team work in local manufacturing firms.

Minus

Still no one has explained how the development of group skills has anything to do with the integration of TP into high school curriculum.

Some concepts are initiated but not enough to clarify them, so they remained vague.

Although very eye opening, the atmosphere for team building in industry cannot be applied directly to high schools. It is one thing to become aware, quite another to determine appropriate solutions.

Interesting

Team building is occurring in so many medium sized local industries.

Most students entering manufacturing will eventually find team work a necessary aspect of their job.

Learning new approaches to solve group deadlocks as the group works toward its goals.

Hey Roth, this was great stuff!

Yeh xxx Nah Eh

The Handy-Dandy PMI Sheet
Tech Prep Journal by E. Johnson
February 7, 1991

Description of meeting.

Factors associated with the successful integration of TP into high school curriculums. The presentation was made by a state regional curriculum development and resource person who discussed the over all integration of academics and vocational, with some practical exercises in integrating team problem solving skills. TP members did an exercise called *True Colors*, in which team members assessed individual characteristics and learning styles.

Plus

The general topics of the rational for integration, ways to integrate, and integration resources were briefly discussed with supplemental handouts, while the practical way to integrate team problem solving skills was done more thoroughly with participation in practical activities.

The state regional curriculum expert was an extremely effective presenter, having extraordinary delivery skills in speaking, timing, explaining.

Minus

The transition from the general information to the specific applications was rather abrupt and unexplained, which left participants a little vague in the purpose and transition to the practical exercises.

Interesting

Realizing the extent of the national movement in TP.

True Colors activity was a good awareness builder of how one's characteristics affects ones group interaction and learning performance.

Hey Roth, this was great stuff!

Yeh xxx Nah Eh

The Handy-Dandy PMI Sheet
Tech Prep Journal by E. Johnson
February 21, 1991

Description of meeting.

1-4 P.M. As a group we discussed the intent and goals the surveying of present and past students. TP members were broke into two groups, based on school teams, and worked on developing questionnaires for either present or past students. WHS worked on the former.
5-8 P.M. The last part of the evening was spent receiving information about RVC's manufacturing technology programs and touring the RVC tech center.

Plus

The TP members developed the survey, so they had ownership in it.

Touring RVC's tech center helped strengthen and update TP member awareness of current high technology training and RVC's manufacturing related programs.

Survey focused on the question "why don't more students pursue manufacturing careers"?

Minus

The survey develope seemed to general and leading to be a precise statistical instrument, although the areas it sought information were good indicators of students feelings and reactions to manufacturing.

The tour was generally informative, I would liked to have seen more information related to RVC's manufacturing programs and potential TP connections in resources, speakers, tours, and articulation agreements, as well as a joint attempt at selling TP and the PR to build the image of manufacturing programs.

Interesting

RVC manufacturing programs are very broad and in depth.

The average RVC student is a little under 30 years of age, with the average manufacturing student nearing mid-thirties.

RVC's technology center is more modern and practically related to current industry needs than any university in Illinois.

RVC is just keeping up with the changes in the progressive manufacturing firms. Their programs are ahead of most small and middle sized manufacturing firms, but not ahead of the most modern ones. This will suffice to train workers in basic technologies needed by all and serve the majority of workers, provided they take advantage of the opportunities. It also means many of the advanced technicians and engineers will find only a small portion of RVC's curriculum helpful. RVC appears to be aware of this because they offer a variety of mini-courses and tailored courses or seminars in the tech center.

Hey Roth, this was great stuff!

Yeh xxx Nah Eh

page 6

The Handy-Dandy PMI Sheet
Tech Prep Journal by E. Johnson
March 7, 1991

Description of meeting.

Reviewed and revised drafts of present and past student surveys. Discussed articulation agreements, broke into school teams and joined by a RVC TP member developed a draft articulation agreement.

Plus

Articulation agreements were both discussed and worked on by school teams; this helped clarify what they are, their purposes, and how they relate the TP in the high school.

Putting a member of the RVC team on each high school fostered an interrelatedness and an enhanced working relationship between the high school and junior college members.

Don Johnson provided copies of other articulation agreements RVC has, explaining these as well as several others.

Minus

RVC team members are easy to work with, but little flexibility to accommodate a mutual development of sequenced courses.

Interesting

RVC programs are so thorough it is very difficult for high schools to produce students with the broad skills needed to skip over most introductory technology courses.

Hey Roth, this was great stuff!

Yeh xxx Nah Eh

The Handy-Dandy PMI Sheet
Tech Prep Journal by E. Johnson
March 21, 1991

Description of meeting.

1- 4 P.M. The meeting was held at Harlem High School with the first session being a presentation by Gene Bottoms the director of a southern coalition of states making a joint effort in the integration of academics and vocational curriculums.
5-8 P.M. The second half the meeting Don Morrison began the first of two sessions related to cooperative learning.

Plus

Gene Bottoms used many relevant examples which made the case for TP take on more realism. His presentation was also very inspirational and challenging of teachers.

Don Morrison used techniques in his presentation to involve TP members in active participation which helped in grasping and retaining the information.

Minus

Again, many TP members were voicing a concern at how the information presented by Don Morrison related to TP in general and our initiative in particular.

A lot of information to cover; seemed we were just starting to perceive a concept when we were cut short and moved on.

Interesting

The southern states are farther ahead and more in tune with the need to integrate academics and vocational education.

The use of group control and compromise techniques was very open and evident among the TP teams members while working groups on cooperative learning.

Businesses in the southern states have a higher profile and vested interest in public education as they have realized that a key to staying competitive in a world market is a technologically competent workforce coming out of our schools.

Hey Roth, this was great stuff!

Yeh xxx Nah Eh

The Handy-Dandy PMI Sheet
Tech Prep Journal by E. Johnson
April 11, 1991

Description of meeting.

1-4 P.M. The first half the meeting was the second half of Don Morrison s presentation on cooperative learning.
5-8 P.M. At the start of this segment, TP members broke into school teams and met with their indusrtial liason person to decide what things business and education can do in order to promote and aid TP. The rest of the meeting started a series or three sessions on 4-MAT Training; in this one participants took the Learning Styles Inventory (LSI).

Plus

Took LSI to determine learning styles; a good start that focused one to individually relate to one of the four major groupings in 4-MAT Training.

Meeting with industrial liason and discussing TP's goals and concerns from a manufacturer's perspective.

Minus

Many TP members including myself were wondering how 4-MAT Training relates to TP.

I always have a reluctance to categorizing my behaviors and ideas or those of others individuals into a generalized classification system. It is useful to have an approach to arrange an area of individual characteristics, such as learning styles, yet it becomes too easy to label and treat someone as a type rather than an individual.

Interesting

I never knew so much about learning styles and how they affect ones abilities to function in the traditional classroom, both as a teacher and a student.

This will probably be the concept learned in TP that will have the <u>greatest</u> and most <u>long range</u> impact on my teaching.

I discovered my style of learning was a Type III, Converger, but I also possess some learning traits in the three other quadrants.

Hey Roth, this was great stuff!

Yeh xxx Nah Eh

The Handy-Dandy PMI Sheet
Tech Prep Journal by E. Johnson
April 25, 1991

Description of meeting.

The second of three sessions on 4-MAT Training; during this sessions participants examined right and left brain approaches to learning and took a Hemispheric Mode Indicator (HMI), which showed ones brain mode tendencies. The first part of the session we broke into groups with like 4-MAT numbers.

Plus

Finally, presenters have developed a pace for their presentations with which TP members are comfortable. The basic materials are reviewed without extensive, unnecessary explanation and practical applications along with related discussions actively involve participants.

Good explanations of right and left brain modes of learning.

Minus

Given an assignment to establish right and left brain modes of learning in each of the four quadrants of 4-MAT, thus giving eight areas for learning and teaching; this assignment was <u>not</u> explained well enough, it was too vague and up-in-the air.

Interesting

We were broke into groups according to our 4-MAT quadrant number during discussion of the previous homework assignment and taking the HMI; similarity of answers and ideas among group members affirmed to a high degree the likenesses of individuals identified as within the quadrants.

Hey Roth, this was great stuff!

Yeh xxx Nah Eh

The Handy-Dandy PMI Sheet
Tech Prep Journal by E. Johnson
May 9, 1991

Description of meeting.

1-4 P.M. German Apprenticeship Team (GAT) described, presented information, and answered questions related to performance standards in their apprenticeship system.
5-8 P.M. The last segment in 4-MAT training primarily dealt with understanding the right-left brain modes of dealing with teaching and learning in the 4 quadrants. The homework assignments were discussed and the 8 areas were explained in more detail. TP members were broke into groups of 2 or 3 where they worked on identifying lesson plan objectives and teaching methods as to which one of the 8 areas.

Plus

The GAT helped to expand the awareness the TP members to an international perspective and reality.

Becoming more cognizant of right-left brain theory will enhance a teacher's ability to use varying lesson delivery methods to reach students in learning for both sides of the brain.

Minus

Most of which the GAT spoke related to a traditional apprenticeship system, whereas, there was only some transferral of concepts of TP integration.

4-MAT training did not end with a major tie-up of everything we learned; by ending with more new information it seems that we never achieved any mastery so as to be easily implement 4-MAT.

Interesting

Many TP members and industrial advisors had mentioned the need to have businesses help with getting students into industry to motivate, increase awareness, and see relevance; the GAT presentation added new dimensions and additional evidence that this would be a vital concern to increase the success of TP as well as education in general.

Hey Roth, this was great stuff!

Yeh xxx Nah Eh

The Handy-Dandy PMI Sheet
Tech Prep Journal by E. Johnson
May 23, 1991

Description of meeting.

TP wrap-up, discussion, and clarification of deliverables and summer work to be completed during 2 week TP summer schedule.

Plus

TP members seem like a very solidified and directed group compared to the initial several meetings; the group displays cohesion, purpose, and direction.

Don, Julie, and Gene have worked together in a relaxed style which has been direct, succinct, and productive.

The checks were cut early and made everyone smile, talk about motivational tools.

Minus

The specific goals of industrial visits, beyond merely being informative and developing rapore between education and industry, are rather vague. Hopefully, they will become explicit early in the week of visitations.

Lesson plan assignments for the summer have shifted leaving many wondering what exactly we'll be doing in their regards. I feel very good about everything else.

Interesting

That this group has a somewhat clear direction and mission, even though we started out not knowing how we were going to get where we were going. We established a broad base for TP implementation using the many concepts covered. TP is ready for implementation planning and execution.

Hey Roth, this was great stuff!

Yeh xxx Nah Eh

The Handy-Dandy PMI Sheet
Tech Prep Journal by E. Johnson
June 11, 1991

Description of meeting.

Julie and Don led a discussion of reaction to tours and industrial personnel's reactions to TP. The agenda and finished goals for the rest of the TP summer session were discussed, with particular attention given to explaining the lesson plans due as school teams and as discipline teams.

Plus

Reviewing immediate reactions to tours and discussing why some groups had positive experiences and others did not.

Time given to clarifying the assignments to be worked on by teams and individuals.

Minus

Some TP members did not back from tours in time to participate in afternoon session.

Most TP members still not knowledgeable in defining learning or teaching behavior in the areas of 4-MAT to write lesson plans which focus on behaviors from these areas.

Interesting

See the reactions of TP members to meeting with industrial people and touring plants.

Some TP members are expressing a clearer direction on the intergration of academics and vocational.

After industrial tours, teachers are looking more to reinforce basic academics rather than some higher levels of team building and problem solving skills.

Hey Roth, this was great stuff!

Yeh Nah Eh xxx

page 13

The Handy-Dandy PMI Sheet
Tech Prep Journal by E. Johnson
June 12, 1991

Description of meeting.

At the start of this meeting we discussed the tours of the day and thoughts about the usefullness of TP in general. This session concentrated "tying up the loose ends" of the 4-MAT training rationalizing the foundation for TP and work on developing lesson plans within the octants.

Plus

Finally, some direct guideance in developing 4-MAT lesson plans.

Minus

The 4-MAT presenters went back to overstating the basics of 4-MAT when TP members just wanted to get to the meat of the matter.

I felt more confused about 4-MAT lesson plans <u>after</u> today's session.

TP members expressed concerns over the clarity and purpose of TP.

Since we are now working in subject area groups, I see much break down in the group cohesiveness which had developed through the group training activities done by the school groups.

Interesting

4-MAT lesson plans have a wholistic flow covering all octants of learning when one follows them as a guide to lesson plans.

Hey Roth, this was great stuff!

Yeh Nah xxx Eh

The Handy-Dandy PMI Sheet
Tech Prep Journal by E. Johnson
June 14, 1991

Description of meeting.

At the start of the meeting Dr. Roth specified his expectations for the course deliverables. TP members broke into school teams and worked on deliverables. Dr. Roth met with each school team, finalizing and reviewing the school team work. At the end, individuals completed course evaluations.

Plus

Groups worked very dilegently and with a purpose; individuals appeared to have clearer direction and understanding of TP than at any other time in the course.

I was very impressed by the quality of many of the lesson plans and other deliverables being finished by the groups.

Well written and potentially useful course evaluatios.

Minus

Some individuals (fortunately only a few) subtly expound a "take the money and run" attitude; this disturbs and concerns me.

It would be better if standardized formats, or at least criteria check lists, were used to produce deliverables which were corresponding between school groups.

Interesting

TP positively influenced academic members outlook on curriculum integration much more than I thought it would at the outset. The enthusiasm and awareness displayed during group work impressed me.

Hey Roth, this was great stuff!

Yeh xxx Nah Eh

SUMMARY OF ROCKFORD SPRING TOUR AND MEETING
JUNE 11, 1991

TOUR SUMMARY:

During plant tour the TP industrial team was showed plant operations including: shipping/receiving, material storage, finishing, packaging, machine operations, and quality control testing. There were a variety of machines working from foot operated bending and crimping machines to programmed CNC multi-operation machines. During the 1 hour tour many operations were explained in detail, as well as thorough answering of related questions.

MEETING SUMMARY:

The TP industrial team met with John Mink, owner/CEO at the Rockford Spring facility.

Discussion high points of this meeting included:

- Rockford Spring employees around 100 people and does around $7 million dollars in annual sales.
- Computers have mostly been used for payroll up until a year ago. Now they are used for CAD, time keeping, quotations and billing.
- Within the next year computers use will be expanded to shop scheduling, customer service, forecasting, and more bar coding for data collection on materials in shop.
- Each simple machine is inexpensive and run by one low-skilled and low paid worker. Three to five of the more complicated machines will be run simultaneously by a much higher paid and much greater skilled worker.
- Some of the newer operational approaches to shop management, such as "just-in-time" are being evolved as possible into plant operations. Often times these changes only occur with the transition of new workers and new equipment; it is much harder to get existing workers and processes to change.
- The major qualifications for new employees are desire, mechanical skills, motivation, and trainability. New (and potential) employees are tested in basic math and blue print skills.
- Rockford Spring prefers to higher employees in their mid-twenties who have some factory machine experience, good work attendance, and mature and motivated to work.
- First year employees have a high turn-over; over 90% do not make it the first year.

SUMMARY OF DANFOSS ELECTRONICS TOUR AND MEETING
JUNE 12, 1991

TOUR SUMMARY:

During the plant the TP industrial team viewed the following: material storage, the manual and machine assembly of electrical controls and components, the inspection of components, soldering operations, shipping/receiving, CAD, and computer programming for component part testing.

MEETING SUMMARY:

TP members met with Perry Gregorcy who showed video on the Dannish company Danfoss. The video displayed the Danfoss product lines and the quality of the companies manufacturing facilities. Mr. Gregorcy described the Rockford plant's operations as well as concerns with the labor force.

Discussion high points of this meeting included:

- Danfoss uses math, grammar, and dexterity testing to qualify applicants for various positions.
- Danfoss' workforce expanded over the past several years by around 20. Of the new hirees they only keep around 10% past the first 3 months, so they have gone through well over 100 employees in the past couple years.
- Danfoss expects about a 30% growth in sales during the next year, but, rather than hiring new employees they will subcontract much of their increase in component assembly, thereby saving capital expansion and additional labor related costs.
- A majority of shop floor assembly workers do <u>not</u> have the necessary math skills to work in team cells. Danfoss will be running an in-house rememdial math program specific to the job requirements.
- The human resource manager looks heavily at the job application's neatness, completiness, and ability to follow directions.
- Most new workers losing their jobs at Danfoss do so because of failure to follow instructions.
- In regards to finding qualified applicants, Danfoss has the hardest time filling high level technician or office occupation positions.

SUMMARY OF ROCKFORD PRODUCTS TOUR AND MEETING
JUNE 13, 1991

TOUR SUMMARY:

During the plant the TP industrial team viewed the following: header machine cells, thread rolling, heat treating, surface finishing, shipping/receiving, quality control, die and fixture making, and many related supportive or specialized machining operations.

MEETING SUMMARY:

TP members received a competent slide presentation from Michael Matus which outlined Rockford Product's history, company organization, product lines, and machining processes used in their production of fasteners and specialized products.

After the tour, Rick Edwards, Director Human Resources and Marge Opsahl, Employment Manager discussed education and business concerns; some of the high points included:

- Increasingly manufacturing workers need the ability to reason and solve problems.
- The workplace and economic changes of the 1990's will make 1990's a unique time for businesses, particularly successful firms will focus on meeting customer needs.
- Students must realize the need for lifelong learning.
- Education is the key to solving the problems within industry.
- The increases in technology and brain work done by the average manufacturing worker has resulted in the need for more math and communication skills.
- Rockford Products has hired no new workers in the past several years; a trend which will continue for several more, than there will be a critical need for skilled or trainable technicians.
- Industry must learn problem "prevention".
- Companies in the future will spend 10 - 15% of their time on education or training efforts.

SUMMARY OF WINNEBAGO TECH PREP TEAM
MEETING WITH SUNDSTRAND INDUSTRIAL LIASON
APRIL 11, 1991

ATTENDEES: From Winnebago High were Trudy Berger, Fred Bruning, Ernie Johnson, Betty Szott, and David Zimmerman. From Sundstrand Corporation was Fred Bornkamp.

SUMMARIZATION OF MEETING AND NOTED KEY POINTS:

Mr. Bornkamp, Director of Sundstrand Training and Development, briefly described and explained his past history as an educator; then chronicled his rise during the years at Sundstrand.

When Mr. Bornkamp was asked what he envisioned Tech Prep would accomplish he replied, "A climbing of Mount Everest is the combining of both vocational and academics." ///

When pursued for more specifically what business' role in Tech Prep should be he thought "business' people would see curriculums, and then business people and educators would get together to figure out which direction to go."

Ms. Berger pointed out that a major aim of Tech Prep is to "change the mind set of students to take more math/science/english courses."

The group discussed and brought out some of the following key points in regards to curriculum changes:

- A goal of Tech Prep is tying the industrial courses in conjunction with the academic courses.
- Basic employee levels necessary in math/science/computers are much higher today. The basics levels taught to the majority of high school students are no longer enough.
- Since the basic skills levels of general high school students is no longer adequate for the modern workplace, "How do we get students into the higher level curriculums?"
- Getting teachers and students out into industry, as well as getting industry people into schools, would create a greater awareness of all parties.
- Educators should listen more to what students think are successful educational experiences.
- Educators should exchange more information with one another about successful efforts; there is often waisted time spent when others have useful solutions to the problems we face.
- Schools should call on industry more for guest speakers, tours, summer work programs, and feedback.
- There are getting to be fewer goodjobs in industry, but the remaining goodjobs need higher level "A" students.

SUMMARY OF WINNEBAGO TECH PREP TEAM
MEETING WITH SUNDSTRAND INDUSTRIAL LIASON
APRIL 11, 1991
(continued)

- One the current problems is that the higher level students are not going into manufacturing, but into more professional post-secondary programs.
- The is a clear need to attract a higher level of students into A.A.S. programs which can transfer into 4-year programs. These programs need to be flexible, hands on, and articulate with universities.
- We need a better job of selling students on manufacturing.
- Every career field wants the top 50%, how do we reach the middle 50%?
- We need to find ways to expand career options of students.

Mr. Bornkamp brought up an article he had recently read about a noteworthy regional Ohio vocational center with very "high tech" programs which grab the interests of students. Adequate vocational funding levels also helped make this center's program successful. He felt that in order to be effective, Tech Prep had to grab the interests of students.

One of the major points discussed to some depth was that of internships. Intership could motivate students to work in technical programs, help students see first hand the relevance of their studies, and get younger (grades 9 & 10) students turned-on to manufacturing careers. Teachers could also gain much from industrial internships such as seeing how academics are applied and the current things being emphasized. There was a strong consensus that internships would motivate students and educators to work towards an integration of academics and technical curriculums.

A prevailing "buzz word" in today's industry is "benchmarking", which means copying the efforts we see by others which are successful in business. Mr. Bornkamp thought that this is a good practice for industry and could prove helpful for educators as well.

The meeting ended with the team from Winnebago planning to meet on Wednesday, April 17, to discuss further ways Mr. Bornkamp may work to help them in the Tech Prep initiative. The team members were to develop a list of questions and concerns, which Ms. Berger would relate to Mr. Bornkamp.

Summarization by Ernie Jonnson, April 15, 1991.

ATTACHMENT F

PUBLICATIONS:

-Focus on CEANCI - Fall 1990
-Focus on CEANCI - Winter 1991
-Focus on CEANCI - Spring 1991
-Brochure: A Most Important Decision

A MOST IMPORTANT DECISION . . .

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FISCAL AGENT

Dr. Richard L. Fairgrieves
Regional Office of Education
Boone-Winnebago Counties

SYSTEM DIRECTOR

Julie Nichols

Career Education Associates of North Central Illinois (CEANCI) is the regional delivery system for vocational education in Boone, Winnebago, and northern Ogle counties. With its primary purpose aimed toward coordinating and administering vocational programs, CEANCI strives to foster positive attitudes toward career education in business, industry, education, and the community.

VOCATIONAL EDUCATION — A SMART CHOICE . . .

CEANCI
5279 28th Avenue • Rockford, Illinois 61109

Dear Parent:

Planning for high school is an exciting and challenging time. You as a parent, can share in this excitement by helping your child select a sequence of courses that will lead to a career.

Vocational education allows your child to explore his/her interests by applying theoretical knowledge to practical problems. Courses in vocational education help your child acquire the skills that are required for employment. New educational initiatives such as Tech Prep will coordinate vocational and academic offerings for improved career preparation.

Students are encouraged to pursue career choices on the basis of interests and abilities. Breaking through gender stereotypes will help expand career options. Students having special needs may be provided support and services to enable them to become successful. All students have access to educational programs regardless of their special needs.

Your high school provides a variety of courses and services that will help to ensure your child's success. For further information, contact the school guidance counselor. Now is the time to work together in making these important decisions.

Sincerely,

Linda Hallstrom — Lynn Stafford — Donna Buckler

Linda Hallstrom — Lynn Stafford — Donna Buckler

Regional Vocational Special Needs Coordinators

VOCATIONAL OCCUPATIONAL AREAS...

HEALTH

The health occupations area prepares students to care for sick and injured people and to contribute to their wellness. With unlimited career potential, jobs will continue to be available in hospitals, clinics, and other health facilities. Personal and professional challenges and satisfactions are provided in health occupations.

CHOICES / CHALLENGES ... A CAREER

An Equal Opportunity/Affirmative Action Employer. One hundred percent of the cost of this publication has been paid by federal funds. The total project budget is $205,184.

INDUSTRIAL TECHNICAL

Employment projections show a great need for industrial and technical workers. Courses in this area encourage critical thinking skills and applications of academic concepts in a laboratory setting. Technical preparation for manufacturing, construction, electronics, automotive, drafting and graphics occupations can be obtained.

EXPLORE THE OPPORTUNITIES

BUSINESS

Classroom and laboratory experiences help to prepare business education students for occupations that establish, organize, manage, and support business. Information processing, and other computer technologies are important components of management, accounting and secretarial occupations. Opportunities to develop leadership and entrepreneurial skills are available for students.

HOME ECONOMICS

Home economics education prepares students for multiple roles in the home, community, and workplace. Students may develop skills and acquire competencies necessary for employment and/or post-secondary schooling. Training in food services, child/day care services, and clothing and apparel occupations can be obtained.

INVEST IN YOURSELF— THE REWARDS WILL BE GREAT...

AGRICULTURE

Agriculture is an industry with a diversity of career opportunities. Decision making and problem solving skills, necessary for success in agriculture business/management, and horticulture careers can be achieved. Applications of science concepts will continue to increase the relevancy of agriculture education.

RF MEDIA

FOCUS on CEANCI

CAREER EDUCATION ASSOCIATES OF NORTH CENTRAL ILLINOIS

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Spring 1991

For the first time, twenty-one math, science and communications teachers will be joining fourteen counselors and industrial technology instructors in a business/industry internship. Tech Prep participants will have the opportunity to observe how the concepts they teach are applied in business and industry settings, and how to redesign lesson plans with applications oriented toward manufacturing.

Additionally, the Tech Prep teams will learn about the academic and technical skills needed by world class workers, be better able to assist students with their career planning and establish contacts with RVC/ CEANCI's partners in the new Tech Prep Manufacturing Degree Program.

Other benefits afforded participants are three graduate hours of credit and a stipend.

NEWSREEL

GUIDE FOR EMPLOYMENT ARRIVES

"What's Next? A Guide for Employment", a booklet designed for high school seniors is in your school! Development of the booklet was undertaken by the Student Services Committee, and spearheaded by Trudy Berger-Winnebago, Donna Buckler-CEANCI, Chuck Christophersen-Belvidere, Phil Meli-Auburn, Bill Rosecrance-Harlem, and Olive Poliks-Illinois Vocational Student Services Network Consultant.

Each of the counselor representatives from the schools have created a dissemination plan within each building for the booklet and have incorporated ways to use its content. An additional classroom set of the booklets has been sent to each vocational director or coordinator for use in cooperative vocational education classes or within other settings.

Because the booklet contains current information on resume preparation, writing letters of application, tips for filling out a job application, a guide for preparing for an interview, writing a thank you letter, suggestions for being successful on the job, and pointers for writing a letter of resignation, this resource can be invaluable when integrating Employability Skills into the classroom.

A similar document was distributed throughout the region last year. It was highly regarded by area businesses and was used in preparing students for Job Fair.

RECRUITING WITH TECHNOLOGY

With the technology of Channel 1 available in many of the region's classrooms and becoming available to more in the fall, Chuck Christiansen, Harlem High School Industrial Division Chairman has accomplished a recruiting coup. Chuck created video segments of the many courses available in industrial technology and then used the television format to show his video to every student in the school. The videos were used at registration time to heighten awareness for both students and adults.

Chuck commented that the quantity of footage that needed to be shot in order to get the three to five minute segments he desired was far more extensive than he imagined. "Writing appropriate narration without getting too verbose and adding some melodies were far more time consuming than I imagined."

Chuck also felt it important to place copies of the video at the disposal of central administration, the counseling staff, the library and the school board.

WEHRLE ATTENDS CONFERENCE

Over sixty instructors have attended workshops or conferences this year-many more than once-with over $10,000 in costs being underwritten by QAP funds.

Dick Wehrle, Jefferson High School, recently returned from a Technology Conference with CNN's Bernard Shaw as the keynote speaker. Shaw had recently returned from the Gulf conflict. Wehrle felt that Shaw's "insights into the war were valuable considering the sanitized version received from stateside media." Shaw also addressed educational concerns, using quotes such as "our society has long blamed and little bolstered our schools," and "in our society and in our schools, there is too much passive watching and passive listening. Learning must be made to be active."

The Transparent School Model/Improving Parent Involvement was also attended by Wehrle. This telephone base computer program allows parents to call school 24 hours a day, to find out what their kids studied and what the homework for the day is. Teachers who have used the programs indicate that a maximum of five minutes per day is needed to update their message. With over 60% of parents calling every day indicators show improved attendance, and increased parent involvement.

Some QAP funds remain for staff desiring to update curriculum or attend professional conferences that are held during the summer. Requests for approval are still being accepted in the CEANCI office.

VOC-ED WEEK COMPLETED

Several activities were recently completed by area educators in recognition of National Vocational Education Week. Harlem High recently hosted all sophomores from South Beloit High School. South Beloit students access skill level courses at the Harlem campus. Bill Rosecrance, Harlem counselor, arranged for peer guides to take SBHS students on a tour of the Harlem facility. The field trip promoted areas in business, home economics, construction, transportation, drafting, electronics, and cooperative vocational education. Students had a chance to become familiar with the Harlem campus and to have their questions about specific vocational programs answered by Bill Rosecrance and Nelson Pyle, Harlem Principal.

Dave Johnson, SBHS counselor, said he felt the trip was important because students needed to see first hand what was involved in the skill level vocational classes. Counselors stressed that

THE FREE, INEXPENSIVE AND CURRENT MATERIALS LISTED BELOW MAY BE USED FOR UPDATING YOUR CAREER RESOURCE CENTER

NAME AND ADDRESS OF FIRM	MATERIALS BEING OFFERED	INFORMATION NEEDED TO OBTAIN
U.S. Department of Interior National Park Service PO Box 37126 Washington, DC 20013	"National Park Service Careers"	Free Booklet
American Dietetic Association 216 W. Jackson Blvd. Suite 800 Chicago, IL 60606	"Dietetics: Professional Profiles" "Dietetic Technician: A Dietetic Professional"	Free Booklet Free Leaflet
Virginia Health Council 3312 W. Cary Street Richmond, VA 23221	"Health Careers Reference Manual"	Free Manual
American Chiropractic Association 1701 Clarendon Blvd. Arlington, VA 22209	"Facts About Chiropractic Education" "Planning a Career in Chiropractic"	Free Leaflet Free Booklet
American Association of Colleges of Osteopathic Medicine 6110 Executive Blvd. Suite 405 Rockville, MD 20852	"Osteopathic Medical Education"	Free Leaflet
American Federation of Teachers Publications Dept. 555 New Jersey Avenue NW Washington, DC 20001	"Teaching as a Career"	Free Booklet
National Council for Accrediation of Teacher Education 2029 K Street NW, Suite 500 Washington, DC 20006	Listing: NCATE 36th Annual List of Accredited Programs/Units	Free Listing
National Student Nurses' Association 555 W. 57th Street New York, NY 10019	"Is Nursing for You?"	Free Booklet Self-Addressed Stamped Envelope
Professional Church Leadership National Council of Churches of Christ in the U.S.A. 475 Riverside Drive, Room 704 New York, NY 10115	"What Are You Going to Do with the Rest of Your Life"	Free Pamphlet Business-sized, Self-addressed Envelope
Professional Secretaries International 10502 NW Ambassador Drive PO Box 20404 Kansas City, MO 64195-0404	"Career Brochure." "Secretarial Want Ad Survey, 1990"	Free Brochures
Society for Human Resource Management 606 North Washington St. Alexandria, VA 22314	"Careers in Human Resource Management"	Free Pamphlet Business-sized, Self-addressed Stamped Envelope
American Psychological Association 1200 17th Street, NW Washington, DC 20036	"Catch the Fast Track to Success in Psychology...A Student Guide to APA Divisions" "Careers in Psychology"	Free Pamphlets Attn: Division Services Offices Attn: Educational Programs
Society for Industrial & Organizational Psychology, Inc. 657 E. Golf Road Suite 309 Arlington Heights, IL 60005	"The Science and Practice of Industrial & Organizational Psychology"	Free Pamphlet
Association for Experiential Education CU Box 249 Boulder, CO 80309	Information on experiential education.	Write for Free Information
National Shorthand Reporters Association 118 Park St., SE Vienna, VA 22180	"The Shorthand Reporting Career Brochure" "About the National Shorthand Reporters Association"	Free Brochure #P44 Free Leaflet

THE FREE, INEXPENSIVE AND CURRENT MATERIALS LISTED BELOW MAY BE USED FOR UPDATING YOUR CAREER RESOURCE CENTER

NAME AND ADDRESS OF FIRM	MATERIALS BEING OFFERED	INFORMATION NEEDED TO OBTAIN
Education Council of the Graphic Arts 4615 Forbes Avenue Pittsburgh, PA 15213	Information on careers in the printing industry.	Free Information
Printing Industries of America 100 Daingerfield Road Alexandria, VA 22314	Career catalog	Free Catalog
American Society of Radiologic Technologists 15000 Central Avenue, S.E. Albuquerque, NM 87123	"The Nuclear Medicine Technologist: A Career for You"-"The Radiation Therapy Technologist: A Career in Cancer Management"-"The Radiographer: A Career for You?"-"The Sonographer: A Career for You?"	Free Leaflets
Association for Manufacturing Technology 7901 Westpark Drive McLean, VA 22102	Fact sheets on Industrial Machinery, Mechanics, Setup Operators, Punch Operators, & Toolmakers and Diemakers	Free Fact Sheets
Department of Defense Dependent Schools 2461 Eisenhower Avenue Alexandria, VA 22331	"Overseas Employment Opportunities for Educators"	Free Brochure
Dow Jones Newspaper Fund PO Box 300 Princeton, NJ 98543	"Advisor Update"	Free Quarterly Newsletter
National Action Council for Minorities Engineering 3 W. 35th St. New York, NY 10001	"Student's Guide to Engineering Schools"-"The Sky's Not the Limit" A Career in Engineering Knows No Bounds"	Free Guides

THE FREE AND CURRENT MATERIALS LISTED BELOW MAY BE BORROWED FROM THE ILLINOIS VOCATIONAL CURRICULUM CENTER (IVCC)
800-252-4822

ITEM	FORMAT	CATALOG NUMBER
How Valuable Is Your Future? Careers in Precision Metalworking	Videotape	VT 671 TOOL 1989 - 1
CPR and Emergency Procedures for Choking for Infants and Young Children	Videotape	VT 617.026 SMIT 1988 - 1
Drinking and Driving	Videotape	VT 613.81 PRIT 1988 - 1
Automated Distribution at Eastman Kodak Company	Videotape	VT 658.7 EAST 1988 - 1
The Enabler	Videotape	VT 658.7 WEBB 1988 - 3
Fitting the Pieces Together	Videotape	VT 658.7 WEBB 1988 - 4
Material Handling in Textile Industry	Videotape	VT 658.7 WEBB 1988 - 2
System Integration Specialist	Videotape	VT 658.7 WEBB 1988 - 1
Help Wanted: Employer Will Train	Videotape	VT 600 JRC 1989 - 1
Inside Careers: Broadcasting Studio Tours	Videotape	VT 384.54 WALK 1990 - 1
A Manufacturing Curriculum for the Twenty-First Century	Videotape	VT 670 SCAR 1990 - 1

vocational education is open to everyone and the fact that a student is in college prep does not exclude them from vocational course offerings.

North Boone's Future Community Leaders of American (FCLA) also completed a busy week of activities to promote National Vocational Education Week. Contests were held each day of the week, including guessing the number of pennies in a jar; identifying nursery rhymes from newspaper headline clues; naming baby pictures of students and faculty; identifying foods by the ingredients given; guessing the number of toothpicks in a jar; and naming the Mystery Person from clues given each day. Students and staff were treated to a free breakfast of rolls donated from Belvidere, Harvard, and Rockford McDonald's and Hardee's and orange juice donated by Sav-U Foods and Pacemaker in Belvidere. Over one hundred prizes were donated by various businesses in the area to be used for contests and general drawings for all students to enter.

The Club also had their annual Valentine carnation sale and donated $70.00 to the Student Council to assist in the cost of a recent all-school assembly.

Sites around the region held writing and drawing contests tied to careers, used school displays to highlight students and their work. Additionally, "A Smart Choice", the CEANCI video was used with middle school students as preparation for fall scheduling.

OUTREACH AND RECRUITMENT

What do Poplar Grove Elementary, and Kinnikinnick School have in common?

Both school have recently provided a Career Fair for their students. Bob McVinnie, counselor at Kinnikinnick, felt that his students were missing the link between what they were studying and career applications. Additionally many students couldn't identify interests or academic strengths.

McVinnie administered an interest inventory and in conjunction with CEANCI coordinated the career extravaganza. Results from the student's inventories, encouraged McVinnie to include resource people from a variety of fields including electricity and electronics, carpentry, medicine, plumbing, auto mechanics, aviation technology, business, chemistry, performing arts, law, banking and military. The speakers presented 30 minute sessions including information on salary, educational background, job duties and interrelated jobs, and the skills necessary for success. Questions from students were also addressed.

Cathie O'Malley, teacher at Poplar Grove Elementary and Rick Smelter, principal at Capron Elementary developed a career component to their Annual Teen Workshop. The theme this year was "What's Best For Me?...Careers And You" and focused on relating the value of math and science to vocational careers.

Don Williams, Director of the Technology Division at Rock Valley College, took his "robotics team" to both workshops for a hands-on exchange with the students. Key in both projects, Don and his staff answered questions about robotics and electronics and explained the opportunities available in technology and engineering careers.

Outreach and recruitment efforts such as these activities are an important component in effective career planning.

COMING EVENTS

QAP DEADLINE APPROACHES

Teachers are reminded that May 17 marks the deadline for submission of QAP reimbursement vouchers and documentation. This reimbursement applies to those requests previously approved in the school year, and that have not yet been submitted.

10,000 TO 1 ODDS FOR CAREER AS PROFESSIONAL ATHLETE

For those high school students who dream of life in the pros, the odds are around 10,000 to one that they will ever realize their dream. And only 100 to one that they will even be able to participate in athletics at the Division I college level. The table (below) shows the number who participate each year in high school and college and the number who enter major league professional sports.

Number of Participants

Sport	High School	College Div.I	New Major League Professional/Year	Odds of H.S. to Pros
Football	956,500	50,757	19	25,000 to 1
Basketball	505,100	1,393	4	810,000 to 1
Hockey*	23,500	4,691	20*	10,000 to 1
Baseball	393,905	22,304	300	1,300 to 1

*Hockey figure is low because most new players come from Canada.

Source: New Perspectives, Winter 1988

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CAREER EDUCATION ASSOCIATES OF NORTH CENTRAL ILLINOIS
CEANCI

COMING ATTRACTIONS

DATE	EVENT	LOCATION	HOURS	CONTACT INFORMATION
June 11-13	Future Farmers of America State Convention	Champaign, IL	-	Ron Reische 217-782-4877
June 13-14	Improving Student Performance through Integrated Curriculum	Jumer's Chateau Bloomington, IL	9:30-6:00 P.M. 8:30-3:00 P.M.	Kathy Hatch 309-438-2380
June 17-20	IL Assoc. of Vocational Agriculture Teachers Annual Conference	Decatur, IL	-	Ron Reische 217-782-4877
June 18	IVA Legislative Day	Springfield, IL	-	Karen Brown 217-544-0815
July 21-24	Mid America Vocational Curriculum Center Competency - Based Curriculum Workshop	St. Louis, MO	-	Joanne Aulgur 800-654-3988

FOCUS on CEANCI

CAREER EDUCATION ASSOCIATES OF NORTH CENTRAL ILLINOIS

MEMBER DISTRICTS

Belvidere
Byron
Durand
Harlem
Hononegah
Meridian
Mount Morris
North Boone
Ogle County Cooperative
Oregon
Pecatonica
Rochelle
Rockford
South Beloit
Winnebago

FISCAL AGENT

Dr. Richard L. Fairgrieves
Regional Office of Education
Boone - Winnebago Counties
(815) 987-3060

SYSTEM DIRECTOR

Julie Nichols - 226-1755

SPECIAL NEEDS/ BUILDING FAIRNESS COORDINATORS

Donna Buckler - 226-1768
Linda Hallstrom - 226-1746
Lynn Stafford - 226-1719

SECRETARY

Dolores Rolston - 226-1717

Fall 1990

"A Smart Choice...Vocational Education", is in your high school! This twelve-minute video stars high school students from Boone, Ogle, and Winnebago Counties, and highlights vocational training and programs available in the CEANCI region. Thought provoking comments from Sue Grans, Rockford Area Chamber of Commerce; Sanders Howse, Rockford Development Corporation; and, Carl Towns, Ingersoll Milling Machine Company; along with narration from WZOK's Liz Wylder will heighten career awareness for students.

As the title indicates, the video emphasizes the importance of career planning, and making the right choices to maximize life's satisfaction. Non-traditional careers are featured, and the need for advanced training beyond high school is reinforced throughout this video.

The video will be used with CEANCI-conducted assessments, for parent orientation sessions, and with other audiences. Students will also receive a hot colored "A Smart Choice" pencil with which to complete their assessment instrument. Folders have been printed with the video title and used with teacher in-service sessions to remind vocational staff of the availability of this promotional aid.

Contact the vocational director or coordinator in your school today to access the video!

NEWSREEL

TECH PREP GRANT AWARDED

Strengthening education in Illinois is the goal of a new State Board of Education initiative, known as Tech Prep, which focuses on preparing students for advanced technical careers through a rigorous academic and vocational program.

State Superintendent of Education Robert Leininger has said that, "Tech Prep will revitalize the State's vocational-technical education programs to prepare our students for the work force of the future. The integration of academic and vocational courses will make Tech Prep Programs a valuable option for many of our students."

By combining college-preparatory and vocational-technical curricula, students will possess the necessary skills to enter technical careers after completing a two-year certificate program at a community college. Tech Prep will also enable students to continue their education for a four-year college degree.

To initiate the Tech Prep Program, seventeen planning grants were awarded to educational agencies in Illinois. Thirty-five agencies vied for the grants, with a planning grant being awarded to Rock Valley College. RVC and CEANCI will work as partners to involve high schools, community colleges, businesses and industries in developing Tech Prep programs.

Tech Prep represents sequenced vocational-technical courses integrated with academic course work. This combination is designed to provide a rigorous program that meets the expectations of business and industry and institutions of higher learning.

Tech Prep students will be able to demonstrate competence in mathematics, science, and oral and written communication and to apply problem-solving skills. RVC/CEANCI Tech Prep will equip students to meet employer standards in manufacturing technologies including:

* Automated Manufacturing Technology
* Computer-Aided Mechanical Design Technology
* Electronic Technology/Electronic Engineering Technology
* Materials Management
* Management-Integrated Manufacturing
* Quality Engineering Technology
* Technical Writing
* Tool and Die

Northern Illinois University will be working with the five grant recipients in manufacturing to identify the standards necessary for on-the-job competency.

As part of the Tech Prep initiative, the State Board is working with the Department of Commerce and Community Affairs, the Illinois Job Training Coordinating Council, and the Illinois Manufacturers Association to develop a statewide manufacturing Tech Prep program. This unique cooperative venture will be piloted in five of the Tech Prep sites throughout the State, of which the RVC/CEANCI is one.

Because Tech Prep provides the opportunity for students to become prepared for both the workplace and college degree programs, Tech Prep outcomes include the following:

* Students acquire academic skills needed for degree programs in two-year colleges and for four-year degree programs at universities.
* The need for remedial course-work in college is eliminated.
* Students are able to relate academic course work to the "real world."
* Students acquire technical skills for many entry-level jobs and gain a head start for related college programs..

As more information becomes available, it will be shared with teachers.

VIP COMPLETES 5TH SUCCESSFUL YEAR

The fall recognition dinner was true celebration as 54 educators and business persons gathered to: receive individual recognition; enjoy renewing friendships; and hear testimonials from their peers involved in this past year's VIP Program.

They also learned many interesting facts about the 56 participants in the 1990 VIP Program at ESC#1. Of the 56 participants, 49 are vocational educators, 5 are counselors, and 2 are administrators. 80% of the educators are from high schools, 15% are from community colleges, and 5% are from junior/middle schools. The vocational areas represented by the largest number of educators were industrial, home economics, and business. 100% of the educators would recommend the VIP experience to their peers. The average VIP experience was 5.7 weeks long and 29.7 hours per week. 75% of the educators rated their VIP experience as excellent with the remaining 25% rating it very good. The VIP experience is successful!

The business partners also were asked to evaluate the VIP Program. Nearly every one agreed to participate in the program again. Several business persons commented on the benefits of "hands on experience." Many were very impressed with the quality of educators, their eagerness and desire to learn. Business enjoyed being involved in the VIP Program!

The 1991 VIP Program is just around the corner. Applications will be going out from the CEANCI office in late January or early February. Plan the VIP Program into your summer 1991 schedule now! If you are new to the program, talk to a peer who has been involved in VIP. If you have been a VIP Participant, share the good news. The application deadline is the first part of March. For more information, call Don Morrison, Staff Development Coordinator at ESC#1 815-987-3023 or Jan Bowman VIP Coordinator after February 4, 1991.

THE FREE, INEXPENSIVE AND CURRENT MATERIALS LISTED BELOW MAY BE USED FOR UPDATING YOUR CAREER RESOURCE CENTER

NAME AND ADDRESS OF FIRM	MATERIALS BEING OFFERED	INFORMATION NEEDED TO OBTAIN
IEEE 1828 L Street NW, Suite 1202 Washington, DC 20036	"Careers in Electrical, Electronics, and Computer Engineering"	Free Leaflet
National Hispanic Bar Association Education Committee PO Box 20663 Cathedral Finance Station New York, NY 10025	"Ever Thought of Becoming an Attorney?"	Free Booklet
Geological Society of America PO Box 9140 Boulder, CO 80301	"Future Employment Opportunities in the Geological Sciences" "Careers in the Geosciences"	Free Leaflets
Women's Bureau Box WJ, 200 Constitution Ave., NW Washington, DC 20201 or American Women in Radio & Television Inc. 1101 Connecticut Ave., NW Suite 700 Washington, DC 20036	"Women on the Job: Careers in the Electronic Media"	Free Booklet
American Trucking Associations Office of Public Affairs 2200 Mill Road Alexandria, VA 22314	"Sharing the Road with a Car" "The Commercial Driver License Program"	Free Brochures
Championship Auto Racing Teams, Inc. 390 Enterprise Court Bloomfield Hills, MI 48012	"Driving Schools"	Free Fact Sheet
National Association of Trade and Technical Schools PO Box 2006 Annapolis Junction, MD 20701-2006	"Handbook of Private Accredited Trade and Technical Schools"	Free Booklet
American Dental Association Department of Salable Materials 211 E. Chicago Avenue Chicago, IL 60611	"Have You Considered Dental Assisting?" & "Have You Considered Dental Laboratory Technology?"	Free Brochures
National Association of Dental Laboratories 3801 Mt. Vernon Ave. Alexandria, VA 22305	"Hands That Think" & "Accredited Dental Laboratory Technology Educational Programs"	Free Brochure
American Bar Association Order Department 750 North Lake Shore Drive Chicago, IL 60611	"Law as a Career"	Free Leaflet
Bureau of Alcohol, Tobacco and Firearms 1200 Pennsylvania Avenue, NW Washington, DC 20535	"Special Agents"	Free Leaflet

THE FREE, INEXPENSIVE AND CURRENT MATERIALS LISTED BELOW MAY BE USED FOR UPDATING YOUR CAREER RESOURCE CENTER

NAME AND ADDRESS OF FIRM	MATERIALS BEING OFFERED	INFORMATION NEEDED TO OBTAIN
National Employment Listing Service (NELS) Criminal Justice Center Sam Houston State University Huntsville, TX 77341	"Career Information"	Free Brochure
United States Secret Service Office of Public Affairs 1800 G Street, NW Washington, DC 20223	"Special Agent & Other Career Information"	Free Leaflet
United Brotherhood of Carpenters and Joiners of America Apprenticeship and Training Department 101 Constitution Avenue, NW Washington, DC 20001	"Carpentry as an Occupation"	Single Copy Free

THE FREE, INEXPENSIVE AND CURRENT MATERIALS LISTED BELOW MAY BE BORROWED FROM THE ILLINOIS VOCATIONAL CURRICULUM CENTER (IVCC)

Telephone 1-800-252-4822

ITEM	FORMAT	CATALOG NUMBER
A Bright Future in the Machine Shop	Videotape	VT 621.8 LAKE 1987-1
Preparing Women and Men for the Future	Videotape	VT 658.3042 OHIO 1989-1
The Commodity Challenge	Videotape	VT 330 CATA 1988-1
Cooking Today's Beef	Videotape	VT 641.36 NATI 1988-1
Food Science: Technologies with Taste	Videotape	VT 641.3 BOUN 1990-1
Measuring Ingredients and Following Recipes	Videotape	VT 642.0150 LOGA 1984-1
Hello PC	Videotape	VT 651.8 MORR 1989-1
Careers in Allied Health Fields	Videotape	VT 373.23819 CARE 1990-3
Careers in Construction	Videotape	VT 373.23819 CARE 1990-2
Careers in Mechanical Fields	Videotape	VT 373.23819 CARE 1990-4
Careers in Production I	Videotape	VT 373.23819 CARE 1990-5
Careers in the Technical Fields	Videotape	VT 373.23819 CARE 1990-1
*Automobile Designer, Mechanic	Videotape	VT 373.23819 TAKE 1989-3
*Chemical Engineer, FBI Agent	Videotape	VT 373.23819 TAKE 1989-11
*Education (Biology Professor), Nurse	Videotape	VT 373.23819 TAKE 1989-10
*Entrepreneurial Coin Dealer, Structural Engineer	Videotape	VT 373.23819 TAKE 1989-5
*Executive Secretary, Inventor/Entrepreneur	Videotape	VT 373.23819 TAKE 1989-12
*Fire Fighter, Veterinarian	Videotape	VT 373.23819 TAKE 1989-1
*Optometrist, Interior Designer	Videotape	VT 373.23819 TAKE 1989-6
*Paramedic, Restaurateur/Food Service	Videotape	VT 373.23819 TAKE 1989-4
*Pediatric Radiologist, Iron (Steel Worker)	Videotape	VT 373.23819 TAKE 1989-7
*Robotics Developer, Political Cartoonist	Videotape	VT 373.23819 TAKE 1989-9
*Video Producer, Fighter Pilot	Videotape	VT 373.23819 TAKE 1989-2
*TV News Camera Person, Carpenter	Videotape	VT 373.23819 TAKE 1989-8

* These items are not only available through IVCC, but also can be obtained by calling 987-3067 B-WINANCO. Sharon Saunders is available at B-WINANCO from 7:30-2:00 P.M. Monday - Friday.

DISCOVER USES EXPANDED

ACT's computerized guidance system, Discover, has been updated, revised, and is available in your high school. Placed in schools for the second consecutive year, both CEANCI and local school staffs will be encouraging teachers from all subject areas to become familiar with the capabilities of Discover and supporting its use among all students. Discover modules include:

* The Career Journey
* Learning About the World of Work
* Learning About Yourself
* Finding Jobs
* Learning About Jobs
* Making Decisions About Education
* Planning Next Steps

The special needs coordinators will promote the employability skills components that are available in Planning the Next Steps.

Several schools have added the junior high and middle school system to help students with career exploration and educational planning. Durand, Pecatonica, Mount Morris, Stillman Valley and Winnebago now have the pre-high school version available with animated graphics and sound enhancement. Teaching about the world of work, exploring occupations, and planning a high school 4 year plan are all integral parts. An individual high school's graduation requirements can be incorporated to help users select courses on the basis of their proposed educational plans and occupational clusters thus facilitating the development of multiple-year plans.

Additionally, Winnebago H.S. has chosen to network the high school version for simultaneous use by complete classes.

Make it a priority in your school to maximize the use of this highly recognized information system. This motivational tool truly offers a career connection for students in the CEANCI region.

UPDATING COURSE DESCRIPTIONS

As preparations are initiated for course description booklets and other information that is a part of registering students, it is important to become pro-active! Approval of local school programs and courses is based on the information submitted through the CEANCI Education for Employment Plan. And, the reporting of student enrollment in courses is documented through the regional course numbers used in that Plan.

Thus, local course content, descriptions and titles need to be carrying the same message throughout the CEANCI region that appears in the Plan. Customizing descriptions to fit the needs of students is important, but the intent must be consistent between CEANCI submitted materials and local school information. Using the regional numbers in parenthesis in description materials might help to create a crosswalk of information.

Additionally, students need to know about offerings available to them at other sites. Incorporating course titles and/or descriptions into the home school description book is one way to provide students with information on accessing course-work at other than the home school site. Making available other school's description booklets upon request only is not enough to ensure real access of courses for students.

To help provide for continued approval of your courses do make sure that course content is consistent with the regional documentation, reflects task lists, and that course descriptions are current!

SPECIAL FEATURES

IDENTIFICATION UNDERWAY

The Special Needs Coordinators are working in schools to assist with the identification of special needs students enrolled in approved vocational education courses. Donna, Linda, and Lynn have been assisting counselors, vocational directors and instructors with the process. Once identification and the first nine weeks are complete, support services and the purchase of materials can be initiated.

Special needs students benefit from CEANCI purchased materials. These materials are requested by instructors to help ensure classroom success for vocational students. Teachers who have attended sessions conducted by the SNC's have received special needs order forms. One new piece of information required on the forms this year is the regional course number. This number will be used for accountability in serving students and is available from the vocational director in each school. For schools not presently using this number in course description material, crosswalks of local course numbers and regional numbers will have to be made.

To provide for the students in your classes make sure that orders are provided your vocational director and are in the CEANCI office by February 1, 1991!

SCHEDULE ASSESSMENT EARLY!

With over 700 GATB requests alone already scheduled, Donna Buckler, Linda Hallstrom and Lynn Stafford are reminding staff to "schedule their special needs assessment now!" With what is presently scheduled, not many days remain open for testing before Christmas vacation. The special needs coordinators remind vocational teachers that the GATB is designed for juniors and seniors, but that several assessments are available for other age groups that cover interests, vocational awareness, and learning styles.

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CEANCI
CAREER EDUCATION ASSOCIATES OF NORTH CENTRAL ILLINOIS

COMING ATTRACTIONS

DATE	EVENT	LOCATION	HOURS	CONTACT INFORMATION
Nov. 2-3	IL Assoc. of Electricity & Electronics Educators	Ramada Renaissance Springfield, IL	-	Mike Walton 217-431-5547
Nov. 8-10	IL Business Education Conference	Holiday Inn-East Springfield, IL	-	Sharon Fisher-Lasso 708-888-6905
Nov. 15-17	IL Drafting Assoc. Fall Conference	Holiday Inn Decatur, IL	-	Ron Sutliff 217-581-6271
Nov. 30-Dec. 4	American Vocational Assoc. Annual Conference	Cincinnati, OH	-	Karen Brown 217-544-0815
Feb. 1	CEANCI Special Needs Materials Orders Due		-	Dolores Rolston 815-226-1717
Jan. 31	IL High Tech Conference	Holiday Inn-East Springfield, IL	-	Sharon Roberts 618-242-1676
Feb. 14-16	IL Vocational Assoc. Convention	Pere Marquette Hotel Peoria, IL	-	Karen Brown 217-544-0815
Feb. 28-Mar. 2	IHEA, IVHETA, IAEHE Galaxy	Pheasant Run Lodge St. Charles, IL	-	Ruth Hicks 217-782-4877
Mar. 13	IL Plan for Ind. Tech Education Energy	Rock Valley College Rockford, IL	9:30-3:00 P.M.	Dennis Gallo 309-438-2610
Mar. 22	Harlem Conference	Harlem High School Rockford, IL	9:00-3:00 P.M.	Tom Smith 815-654-4565
Mar. 22-23	FBLA State Leadership Conference	Holiday Inn-East Springfield, IL	-	Roger Uhe 217-782-4877
April 19-21	PBL State Leadership Conference	Holiday Inn-East Springfield, IL	-	Roger Uhe 217-782-4877
June 13-14	Improving Student Performance through Integrated Curriculum	Jumer's Chateau Bloomington, IL	9:30-6:00 P.M. 8:30-3:00 P.M.	Kathy Hatch 309-438-2380
June 17-20	IL Assoc. of Vocational Agriculture Teachers Annual Conference	Decatur, IL	-	Ron Reische 217-782-4877

NEWSREEL

TECH PREP UPDATE

The Tech Prep focus is on improving communications, mathematics, science, and technical competencies for students. These improvements are needed for success in the emerging workplace and can be facilitated with change and integration within both vocational and academic curricula. The RVC/CEANCI Tech Prep grant recognizes that staff are the most important component for any change to occur in the classroom and that it will not occur in departmental isolation.

Teachers share the common goal of preparing capable students for life long learning. Yet in order for this goal to be met, academic and vocational teachers must be afforded the time to meet and plan together. Raising the quality of instruction and increasing applications and practical functions in courses are strategies that also must be addressed. Thus, seven teams have begun meeting twice monthly to collectively retool and then develop techniques to better prepare students for manufacturing careers. Selected by their district's administration, the teams, will earn six graduate hours of credit, and a stipend. Most importantly, though, interaction with business/industry personnel, a summer internship, and coursework topics from team building to cooperative learning will allow teachers the opportunity to be on the "cutting edge" of sweeping educational reform.

The Education Design Team members are as follows:

Belvidere - Kathy Colwell, Ken Storms, Carl Benassi, Kris Johnson and Dan Fraker

Harlem - Ellen Letourneau, Bill Rosecrance, Tom Yoe, Carol Falzone and Dan Lang

Hononegah - Rick Webster, Bob Moloney, John Baggiore, Pat Cotter and Kevin Burns

Jefferson - June Lyons, Jan Henningsen, Ray Kelley, Darlene Osborne, and Jack Armstrong

Pecatonica-Durand - Pam Novotnak, Chris Boehlefeld, Merrill Hubble and Mary Drury

Rock Valley College - Dave Bloomstrand, Larry Murphy, Randy Barnhart, Diane Koenig, and Jerry Frang

Winnebago - Fred Brunning, Trudy Berger, Ernie Johnson, Betty Szott, and Dave Zimmerman

VIP APPLICATION DEADLINE MARCH 8

Vocational Instruction Practicum (VIP) applications are currently being distributed throughout ESC#1 by System Directors and Community College Vocational Directors. You are eligible to apply for the VIP Program if you are a teacher, counselor, or administrator listed in the Regional System or Community College Plans for Education for Employment. Seventh and eighth teachers are also eligible for the VIP, but all applicants must spend more than fifty percent of their time in Vocational Education. Priority will be to applicants who have not participated in VIP, although in the past, all approved applicants have been accepted. Send your completed, signed application and resume to ESC#1, attention Jan Bowman no later than March 8. For more information, contact Jan Bowman or Darla at 987-3023.

PROMOTING YOUR VOCATIONAL PROGRAMS

Over 4,500 vocational information brochures, entitled "A Most Important Decision" have been mailed to the parents of eighth graders in the CEANCI region. With photographs of area vocational students pondering important decisions, a glossy red cover, and quotes from the CEANCI video, the brochure has an all new look. Additionally, the mailing has been coordinated to capitalize on course registration at the schools.

Parents are encouraged to help their children plan a sequence of high school courses that will provide a foundation for a life time of career choices and include vocational coursework to expand a student's options and insure success.

Copies of the brochure have also been sent to local board of education members, administrators, counselors and vocational teachers for their reference and to provide further information to parents and students at their local high school.

DOCUMENT SUCCESSES

As special needs, Occupation of Homemaking, and agricultural supplemental materials begin to arrive in your schools, the importance of record-keeping needs to be emphasized!

Anecdotal records showing impact are essential in ensuring complete final reports. Accomplishments that were made possible with these monies, their effectiveness, and ways that students have experienced benefits need to be cited as the materials are being used.

Not only do the final reports for both the Occupation of Homemaking and supplemental

ATTACHMENT G

INDIVIDUAL CAREER PLANNING

-ICP Form

FOUR YEAR EDUCATIONAL RECORD

FRESHMAN

1ST SEMESTER	CR	2ND SEMESTER	CR

MY CAREER GOAL AFTER HIGH SCHOOL IS TO

_____ WORK FULL-TIME
_____ WORK PART-TIME
_____ WORK FULL-TIME/ATTEND SCHOOL PART-TIME
_____ GO TO SCHOOL FULL-TIME
_____ COMMUNITY COLLEGE
_____ OTHER _____
_____ TECHNICAL/TRADE SCHOOL
_____ APPRENTICESHIP
_____ COLLEGE/UNIVERSITY
_____ MILITARY
_____ UNDECIDED

SUMMER SCHOOL RECOMMENDED: YES or NO
CAREER GOAL: _____
DECLARED CURRICULUM: _____

FRESHMAN

EXTRA CURRICULAR ACTIVITIES:

ACTIVITIES: _____

HONORS AND AWARDS: _____
INTERESTS/HOBBIES/TALENTS: _____
CHURCH/COMMUNITY ACTIVITIES: _____

WORK EXPERIENCE:

EMPLOYER ADDRESS

1. _____
2. _____

ADDITIONAL INFORMATION NEEDED FOR CAREER PLANNING:

THINGS TO DO THIS YEAR:

SOPHOMORE

1ST SEMESTER	CR	2ND SEMESTER	CR

MY CAREER GOAL AFTER HIGH SCHOOL IS TO

_____ WORK FULL-TIME
_____ WORK PART-TIME
_____ WORK FULL-TIME/ATTEND SCHOOL PART-TIME
_____ GO TO SCHOOL FULL-TIME
_____ COMMUNITY COLLEGE
_____ OTHER _____
_____ TECHNICAL/TRADE SCHOOL
_____ APPRENTICESHIP
_____ COLLEGE/UNIVERSITY
_____ MILITARY
_____ UNDECIDED

SUMMER SCHOOL RECOMMENDED: YES or NO
CAREER GOAL: _____

SOPHOMORE

EXTRA CURRICULAR ACTIVITIES:

ACTIVITIES: _____

HONORS AND AWARDS: _____
INTERESTS/HOBBIES/TALENTS: _____
CHURCH/COMMUNITY ACTIVITIES: _____

WORK EXPERIENCE:

EMPLOYER ADDRESS

1. _____
2. _____

ADDITIONAL INFORMATION NEEDED FOR CAREER PLANNING:

THINGS TO DO THIS YEAR:

JUNIOR

1ST SEMESTER	CR	2ND SEMESTER	CR

MY CAREER GOAL AFTER HIGH SCHOOL IS TO:

_____ WORK FULL-TIME
_____ WORK PART-TIME
_____ WORK FULL-TIME/ATTEND SCHOOL PART-TIME
_____ GO TO SCHOOL FULL-TIME
_____ COMMUNITY COLLEGE
_____ TECHNICAL/TRADE SCHOOL
_____ APPRENTICESHIP
_____ COLLEGE/UNIVERSITY
_____ MILITARY
_____ UNDECIDED
_____ OTHER _____

SUMMER SCHOOL RECOMMENDED: YES or NO
CAREER GOAL: _____
DECLARED CURRICULUM: _____

EXTRA CURRICULAR ACTIVITIES: **JUNIOR**

ACTIVITIES: _____

HONORS AND AWARDS: _____
INTERESTS/HOBBIES/TALENTS: _____

CHURCH/COMMUNITY ACTIVITIES: _____

WORK EXPERIENCE:

EMPLOYER ADDRESS

1. _____
2. _____

ADDITIONAL INFORMATION NEEDED FOR CAREER PLANNING:

THINGS TO DO THIS YEAR:

SENIOR

1ST SEMESTER	CR	2ND SEMESTER	CR

MY CAREER GOAL AFTER HIGH SCHOOL IS TO

_____ WORK FULL-TIME
_____ WORK PART-TIME
_____ WORK FULL-TIME/ATTEND SCHOOL PART-TIME
_____ GO TO SCHOOL FULL-TIME
_____ COMMUNITY COLLEGE
_____ TECHNICAL/TRADE SCHOOL
_____ APPRENTICESHIP
_____ COLLEGE/UNIVERSITY
_____ MILITARY
_____ UNDECIDED
_____ OTHER _____

SUMMER SCHOOL RECOMMENDED: YES or NO
CAREER GOAL: _____
DECLARED CURRICULUM: _____

EXTRA CURRICULAR ACTIVITIES: **SENIOR**

ACTIVITIES: _____

HONORS AND AWARDS: _____
INTERESTS/HOBBIES/TALENTS: _____

CHURCH/COMMUNITY ACTIVITIES: _____

WORK EXPERIENCE:

EMPLOYER ADDRESS

1. _____
2. _____

ADDITIONAL INFORMATION NEEDED FOR CAREER PLANNING:

THINGS TO DO THIS YEAR:

GRADE AND CREDIT RECORD

CSE	DESCRIPTION	GRD	CREDIT	CSE	DESCRIPTION	GRD	CREDIT	CSE	DESCRIPTION	GRD	CREDIT

ATTACHMENT H

LESSON PLANS

-Pollution Generated by Industry
-Effects of Temperature, Humidity and Pressure on Metals
-Statistical Process Control
-Employability Skills
-Number Intervals
-Effects of Corrosion on Metals

4MAT Lesson Plan Form

Teachers: Fred Bruning, Ernie Johnson
Betty Szott, and David Zimmerman

Title of Unit: Pollution
Generated by Industry
Length of time for Unit: 8-10 days
Grade Level: High School

School District: Winnebago District #323

Unit Objective: Promote student awareness and concern for pollution caused by manufacturing, and to develop possible solutions.

1. Quadrant One, Right Mode

Objective: To have students become more aware of types of pollution generated by the industrial sector.

Activity(s): Have small groups of students list all the different types of pollution generated by industry.

Show video or taped tv documentary on industrial waste.

Evaluation: Assess lists generated by students and group participation.

2. Quadrant One, Left Mode

Objective: To have students reflect and analyze what effect the types of pollution, listed previously, have on their lives.

Activity(s): Students discuss effects the above types of pollution have on them.

Students individually list in order the three types of pollution which concern them the most.

Evaluation: Assess lists generated by students and participation in discussion.

3. Quadrant Two, Right Mode

Objective: To make students aware of the changes in trends in types and amounts of pollution caused by manufacturing over the past century.

Activity(s): Present bar graphs showing decade changes in tons of pollution generated by US manufacturing firms during the past century in the areas of air, liquid, and solid wastes.

Evaluation: Quiz or question students to determine general understanding of the changes in pollution levels as depicted on bar graphs.

4. Quadrant Two, Left Mode

Objective: To help students learn to extrapolate information from bar graphs.

Activity(s): Work sheet designed to assist students draw information from related bar graphs in the three addressed areas of pollution.

Evaluation: Grade work sheet and answers to deductive type questions the teacher would use to determine student ability to understand work sheet questioning.

5. Quadrant Three, Left Mode

Objective: To guide students in changing one form (bar graph) of information into another (pounds of pollution per person) in order to determine trends in changes in per person waste over the last century.

Activity(s): Work sheet designed to teach students to convert tons of waste from the three areas to pounds per person for given decades.

Evaluation: Ability to complete work sheet.

6. Quadrant Three, Right Mode

Objective: To have students brainstorm possible solutions to types of pollution which would be generated by a hypothetical factory.

Activity(s): Given a diagram and a description of a factory, students would identify probable types of pollution and brainstorm lists of possible solutions.

Evaluation: Assess lists and participation in discussion.

7. Quadrant Four, Left Mode

Objective: To have students organize and synthesize information.

Activity(s): Class Research Project - Students pick one aspect of environmental pollution and research ways the pollution could be eliminated or cleaned up.

Possible research activities could include:

- Observational field trips.
- Waste management experts as interviewees of speakers.
- Library or traditional research.

Have students work in small groups and make presentations on research.

Evaluation: The quality of the research and the presentation.

8. Quadrant Four, Right Mode

Objective: Have students summarize what they learn through the media of debate.

Activity(s): Divide students into "pro's and con's" group and debate the question:

"Should the U.S. Government raise taxes on both industry and individuals to provide the money necessary to clean up the environment?"

Students use data from research paper and any other information they deem necessary to choose a side, which will be defended in the debate.

Evaluation: Participation, along with the use of data and logic to support their position.

Integrated Lesson Plan - Industrial Arts
Effects of Temperature, Humidity and Pressure on Materials

Author: Carl Benassi

Objective: To learn the effects of temperature, humidity and pressure on materials.

1. **Quadrant One, Right Mode**

   Objective: Students will become aware of the effects of temperature, humidity, and atmospheric pressure on different materials used in industrial processes.

   Activity: Guest speakers from the photofinishing, grinding, and machining industry will discuss problems encountered in each of their fields due to the effects of temperature, humidity, and atmospheric pressure.

   Evaluation: Student attention and participation.

2. **Quadrant One, Left Mode**

   Objective: Students will become aware of their feelings on how important controlling environmental variables in industrial processes in the future will be when they will be entering the workforce.

   Activity: Teacher led discussion on research and development currently being done in different industires using exotic materials.

   Evaluation: Student attention and participation.

3. **Quadrant Two, Right Mode**

   Objective: Students will become aware of the role of the quality control technician in different industries.

   Activity: Teacher led discussion on the role of the quality control technician in different industries.

   Evaluation: Student attention and participation.

4. **Quadrant Two, Left Mode**

   Objective: Students will become aware of the techniques used in measuring and controlling the effects of temperature, humidity, and atmospheric pressure in industry.

   Activity: Teacher led discussion on techniques currently used to measure and control the effects of temperature, humidity, and atmospheric pressure, in different industries.

   Evaluation: Student attention and participation.

5. **Quadrant Three, Left Mode**

Objective: Students will have the opportunity to use the different probes in conjunction with the computer to measure pressure, humidity, and atmospheric pressure.

Activity: Students will work in groups of two, attaching probes, and noting the results of the changes in temperature, humidity, and atmospheric pressure through the course of the school day.

Evaluation: Students will hand in the results of the day's testing.

6. **Quadrant Three, Right Mode**

Objective: Students will have the opportunity to find out what processes the designers of control systems in industry use.

Activity: Students will work in groups of two, designing a "box" that will shield the "process" taking place inside, against the changes in temperature, humidity, and atmospheric pressure taking place in the outside environment.

Evaluation: Students will hand in the results of their experiment and the teacher will rate them on their success at combating the effects of the outside environment.

7. **Quadrant Four, Left Mode**

Objective: Students will have the opportunity to discuss within and between groups to find out what design features worked best in each other's boxes.

Activity: Student discussion of the data

Evaluation: Student attention and participation.

8. **Quadrant Four, Right Mode**

Objective: Students will have the opportunity to redesign their box.

Activity: Students will be given access to the materials, computers, and measuring devices to try to make their controlled environment (box) work better.

Evaluation: Students will hand in their final results for teacher review.

Integrated Lesson Plan - Science
Temperature, Humidity and
Atmospheric Pressure

Author: Dan Fraker

Objective: To learn the effects of temperature, humidity and atmospheric pressure

1. **Quadrant One, Right Mode**

   Objective: To get student's attention.

   Activity: Demonstrate the effect of atmospheric pressure on a heated aluminum pop can by submersing it into cold water (can will collapse).

   Evaluation: Student attention and participation.

2. **Quadrant One, Left Mode**

   Objective: To relate the effects of atmospheric pressure to the students

   Activity: Ask how many have gone up on an airplane or driven up into and down from mountains. How did it affect your body?

   Evaluation: Student attention and participation.

3. **Quadrant Two, Right Mode**

   Objective: To relate the presure on the pop can as being that which they feel.

   Activity: Talk about the fact that the same air pressure which crunched the pop can is pushing in on you and everything else on the earth's surface.

   Evaluation: Class discussion.

4. **Quadrant Two, Left Mode**

   Objective: To define what atmospheric pressure, temperature, and relative humidity are and how they are interrelated.

   Activity: Show instruments used to measure the atmospheric pressure, temperature and relative humidity.

   Evaluation: Pick students at random to explain each of the instruments.

5. **Quadrant Three, Left Mode**

Objective: To find temperature and relative humidity.

Activity: Sling psychometer lab. Also obtain atmospheric pressure reading at the time of the lab. Do this for three consecutive days.

Evaluation: Have students summerize their lab findings.

6. **Quadrant Three, Right Mode**

Objective: To determine humidity, temperature and pressure given various sets of atmospheric conditions.

Activity: Give students a set of conditions where they know two of the three conditions (pressure, temperature, and relative humidity.) They are to then predict what the third will be. Do several of these, changing the two known conditions each time.

Evaluation: Collect and grade their results based on answer key.

7. **Quadrant Four, Left Mode**

Objective: For students to understand the results of Step 6.

Activity: Discuss the results of Step 6. Ask what relationship they <u>now</u> see between temperature, pressure and relative humidity.

Evaluation: Student attention and participation.

8. **Quadrant Four, Right Mode**

Objective: To see if students can think of man-made factors that can influence these conditions.

Activity: Discuss how manufacturing businesses alter these conditions to produce various products such as metal components.

Evaluation: Student attention and participation.

Integrated Lesson Plan
Mathematics - Creating Graphs

Author: Kris Johnson

Objective: To learn the different types of graphs and to organize data by creating graphs both by hand and by a computer program.

1. **Quadrant One, Right Mode - Create an Experience**

   Objective: To get students' attention.

   Activity: Post different types of graphs around the room, some hand drawn, some computer drawn. Bring a computer into the room and have it display a graph.

   Evaluation: Observe the students' reaction.

2. **Quadrant One, Left Mode - Analyze the Experience**

   Objective: To identify the types of graphs and the effectiveness of each.

   Activity: Discuss the types of graphs (line, bar, circle, pictograph) and how each type might best illustrate certain information.

   Evaluation: Quality of discussion.

3. **Quadrant Two, Right Mode - Integrate Reflections into Concepts**

   Objective: To make conjectures about what each graph has in common and what information would be necessary to create a graph.

   Activity: Make a list on the chalkboard or overhead concerning what a graph should include.

   Evaluation: Quality of list.

4. **Quadrant Two, Left Mode - Develop Theories and Concepts**

   Objective: To teach the steps necessary for creating a graph.

   Activity: Teach the parts of a graph including choosing the type to best illustrate the data, horizontal and vertical scales, placement of data, titles and legends.

   Evaluation: None at this time.

5. **Quadrant Three, Left Mode - Practicing on Defined Concepts**

   Objective: To allow students to practice concepts.

   Activity: Students will create a graph from beginning to end using graphing paper and teacher-supplied data.

   Evaluation: Quality of the graph.

6. **Quadrant Three, Right Mode - "Messing Around"**

   Objective: To personalize the unit.

   Activity: Students will collect data from the results of their science and industrial arts projects and organize this information into a graph. In the computer lab the students will create a graph using a graphing program.

   Evaluation: Quality of the graph.

7. **Quadrant Four, Left Mode - Analyzing Their Own Application of the Concepts for Usefulness**

   Objective: To analyze the results of the graphs.

   Activity: Have students analyze their own graphs for effectiveness.

   Evaluation: Quality of discussion.

8. **Quadrant Four, Right Mode - Sharing What They Do With Others**

   Objective: To share their graphs with the class and discuss possible applications.

   Activity: Display all the graphs. Discuss how they might use graphs in their daily use (such as report writing.)

   Evaluation: Group participation.

Integrated Lesson Plan
English - Writing a Report

Author: Kathy Colwell

Objective: To learn how to incorporate data into a report form.

1. **Quadrant One, Right Mode**

   Objective: To examine previously written reports.

   Activity: Students will read reports from former students and businesses illustrating both good and bad examples of report writing.

   Evaluation:

2. **Quadrant One, Left Mode**

   Objective: To identify how effectively the writers have accomplished their tasks.

   Activity: In groups of three, students will discuss the effectiveness of each of the reports and notice similiarities and differences.

   Evaluation: Student participation.

3. **Quadrant Two, Right Mode**

   Objective: To identify the necessary components of a good report.

   Activity: With students in a large group the teacher leads a discussion on qualities for an effective report. These qualities will be listed on the board.

   Evaluation: Class discussion.

4. **Quadrant Two, Left Mode**

   Objective: To teach the steps necessary for creating an effective report.

   Activity: Concepts such as incorporating data, supporting statements with evidence, and use of graphs should be stressed along with the composition guidelines the students have previously studied.

   Evaluation:

5. **Quadrant Three, Left Mode**

Objective: To write a rough draft of the report.

Activity: Using the information from the science, math and industrial lessons on this subject, the student will incorporate that information into a four-page report. As with other compositions, it will be typed on the computer.

Evaluation: Teacher will correct the rough draft.

6. **Quadrant Three, Right Mode**

Objective: To write a final draft of the report.

Activity: After the teacher has graded the rough draft, the student will write a final draft.

Evaluation: The report will be evaluated ater Step 7.

7. **Quadrant Four, Left Mode**

Objective: To analyze each other's reports for effect.

Activity: The students will again meet in their small groups to analyze whether each other's reports meet the standards mentioned in Steps 3 and 4.

Evaluation: Quality of group discussions. Teacher evaluation of the final draft of the report.

8. **Quadrant Four, Right Mode**

Objective: To discuss how the students might be able to use report writing in their future.

Activity: Discuss what fields/occupations use this type of report writing and how good skills might improve their credibility and ability to persuade others.

Evaluation: Quality of discussion.

Integrated Lesson Plan

Statistical Process Control

Control Charts

Authors: Jack Armstrong, Ray Kelley, June Lyons, and Darlene Osborn

Objective: Students will be able to construct and analyze control charts and understand their usefulness in producing quality products.

1. **Right Mode - Awareness (English)**

   Objective: To enhance student curiosity in quality control

   Activity: Based on their findings in current magazine articles, teams of students will present their opinions of which are the best automobiles, Japanese or American. A class discussion of the presented material will follow.

2. **Left Mode - Arouse/Analyze (Science)**

   Objective: To introduce students to the concept and terminology of normal distribution.

   Activity: Probability experiments using dice, coins, cards, etc.

   Evaluation: Lab report and observing group activity.

3. **Right Mode - Integrate (Manufacturing)**

   Objective: To integrate quality control and distribution with the concept of SPC-control charting.

   Activity: Video tape "The Basics of Quality Control" (1983) (Quality/Technicomp Inc. Cleveland) and/or field trip to company using SPC Control Charting.

4. **Left Mode - Develop Concepts (Math)**

Objective: To teach the concepts of mean, tolerance, control limits, and variables as they relate to control charting.

Activity: Example problem worksheets on control charting and quiz on calculating control limits and plotting production samples.

Evaluation: Quality and accuracy of assignments.

5. **Left Mode - Practice (Science)**

Objective: To allow students to practice concepts and reinforce learning.

Activity: Control charting of sample bolts, springs, washers, etc.

Evaluation: Quality of charting and lab report.

6. **Right Mode - Personalizing (Manufacturing)**

Objective: To allow students to internalize material.

Activity: Student selected mass production project with control charting of key variables.

Evaluation: Quality of student involvement and accuracy of end product.

7. **Left Mode - Analyzing (Manufacturing)**

Objective: Develop students' ability to analyze the usefulness of a concept.

Activity: Class discussion of the effectiveness of control charting in producing a quality product.

Evaluation: Observation of participation.

8. **Right Mode - Moving On (English)**

Objective: To broaden the awareness of quality control.

Activity: Each student will prepare a research report based on interviews with quality control managers from local manufacturing firms. Oral reports on their findings will be given.

Evaluation: Quality of report.

4MAT Lesson Plan Form

Teachers: John Baggiore, Randy Barnhart, Carl Benassi, Merril Hubblie, Ernie Johnson, Ray Kelly, and Tom Yoe

Title of Unit: Employability Skills
Length of time for Unit: 8-10 days
Grade Level: High School
Title of Lesson: How to Properly Fill Out an Application

Unit Objective: Student will be able to neatly, accurately, and completely fill out a job application. See 4-MAT wheel on last page of this lessons.

School Districts: Hononegah, Rock Valley College, Belvidere, Pecatonica, Winnebago, Rockford Jefferson, and Harlem

1. Quadrant One, Right Mode

Objective: Student will be come aware of the role of properly filled out application has in obtaining a job.

Activity(s): Guest speaker from a personnel/human resources department will discuss what factors affect the decision to hire.

Evaluation: Attention and participation.

2. Quadrant One, Left Mode

Objective: Students will become aware of problems their peers have encountered in filling out job applications.

Activity(s): Teacher led discussion on problems students have encountered.

Evaluation: Attention and participation.

3. Quadrant Two, Right Mode

Objective: Students will become aware of different formats and types of questions asked on applications.

Activity(s): Small group discussion on the application format and questions asked.

Evaluation: Attention to task and participation level.

4. Quadrant Two, Left Mode

Objective: Teach proper techniques for completion of job applications.

Activity(s): Teacher lectures on key points of proper application completion.

Evaluation: Review student's notes and quiz.

5. Quadrant Three, Left Mode

Objective: Student will practice filling out job application using previously learned concepts.

Activity(s): Students will complete job applications.

Evaluation: Review applications.

6. Quadrant Three, Right Mode

Objective: Students will personalize the application review process.

Activity(s): Small groups will critique each others applications.

Evaluation: Participation.

7. Quadrant Four, Left Mode

Objective: Students will have more confidence in their application expertise.

Activity(s): Students revise and submit their final draft.

Evaluation: Evaluate the quality and content of the final draft.

8. Quadrant Four, Right Mode

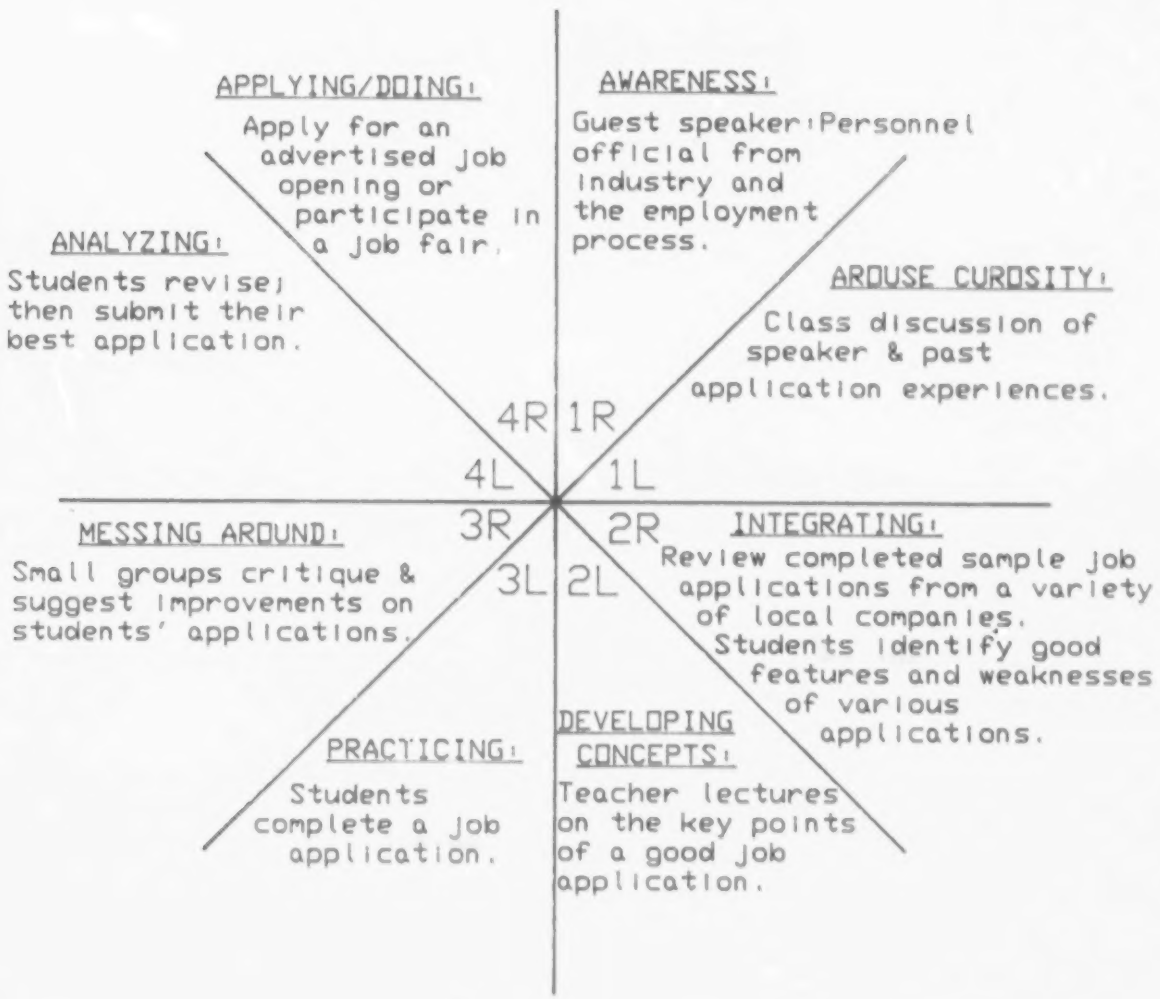
Objective: Student will be able to fill out application with zero errors.

Activity(s): Students will apply for advertised job or go to job fair.

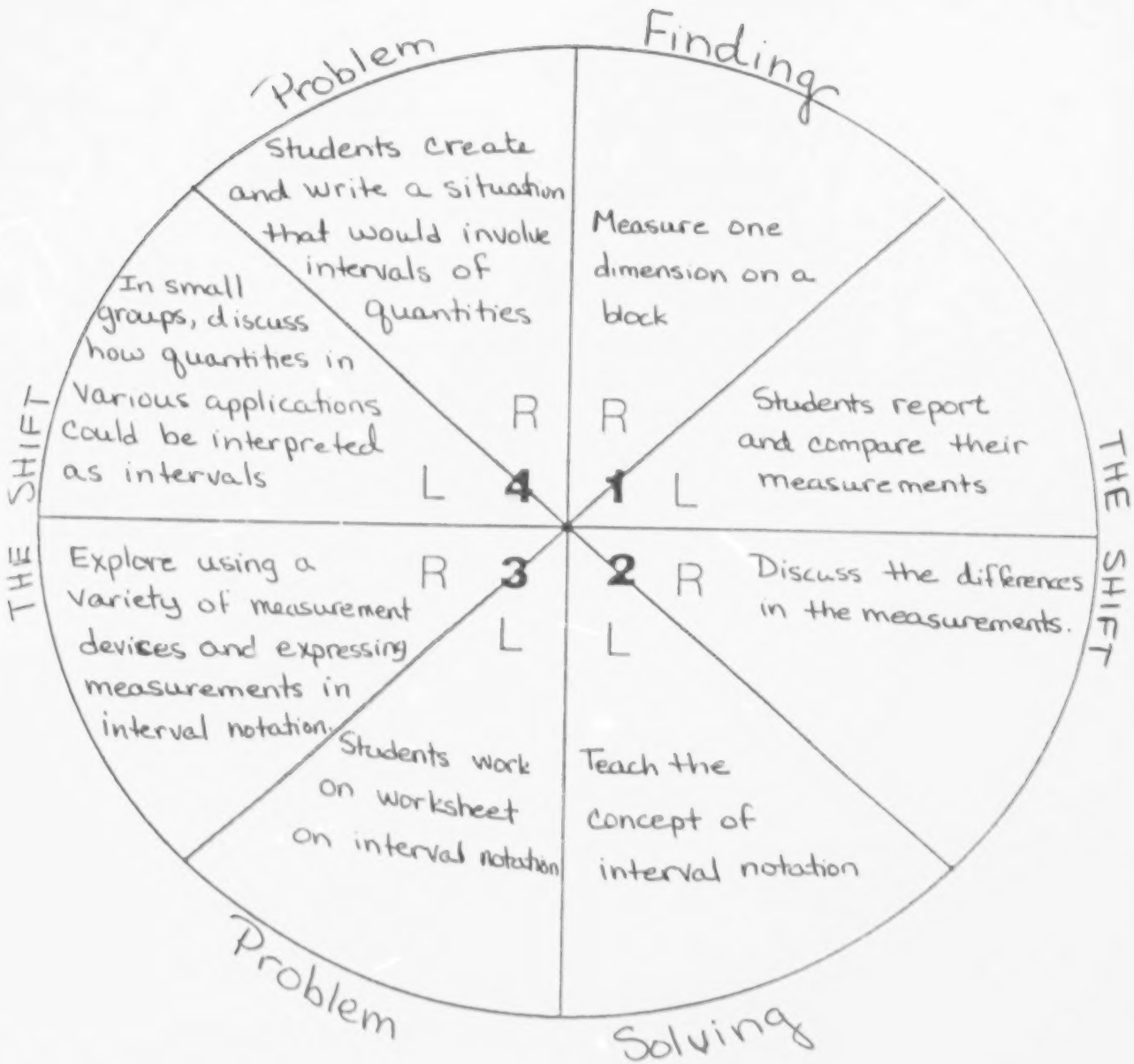
Evaluation: Have people from personnel department rate applications.

Tech Prep Industrial Team
Lesson Plan 4-MAT Wheel

Title:
Employability Skill and Job Application


APPLYING/DOING:
Apply for an advertised job opening or participate in a job fair.
AWARENESS:
Guest speaker: Personnel official from industry and the employment process.
ANALYZING:
Students revise; then submit their best application.
AROUSE CURIOSITY:
Class discussion of speaker & past application experiences.
4R
1R
4L
1L
3R
2R
3L
2L
MESSING AROUND:
Small groups critique & suggest improvements on students' applications.
INTEGRATING:
Review completed sample job applications from a variety of local companies. Students identify good features and weaknesses of various applications.
PRACTICING:
Students complete a job application.
DEVELOPING CONCEPTS:
Teacher lectures on the key points of a good job application.

Mathematics: Number Intervals



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Bernice McCarthy, Ph.D., Director

Mathematics Lesson Plan
Using A Scientific Calculator

Authors: Patrick Cotter, Carol Falzone, John Hagan, Kris Johnson, Diane Koenig, Darlene Osborne, and Betty Szott

Objective: To learn to use the keys of a scientific calculator.

1. **Right Mode - Create An Experience**

   Objective: To allow students to investigate the scientific calculator by themselves.

   Activity: Give each student a scientific calculator and an activity sheet. Let them explore on their own.

   Evaluation: Observe the students working.

2. **Left Mode - Analyze The Experience**

   Objective: To raise questions concerning the functions of nonbasic keys.

   Activity: Discussion about the various keys.

   Evaluation: Quality of the discussion.

3. **Right Mode - Integrate Reflections Into Concepts**

   Objective: To have the students determine the purpose of various keys (memory storage, π, $\sqrt{\ }$, parentheses, $1/x$, y^x, etc.).

   Activity: Ask the students to use certain keys in various ways and let them make a conjecture about what happens.

   Evaluation: Students active involvement.

4. **Left Mode - Develop Theories And Concepts**

   Objective: To teach the use of the keys of the calculator.

   Activity: Give step-by-step instructions on the chalkboard or overhead on the use of the keys of a scientific calculator.

   Evaluation: Objective quiz.

5. **Left Mode - Practicing On Defined Concepts**

Objective: To allow students to practice using the calculator.

Activity: Provide each student with a worksheet with direct applications of the various calculator keys studied.

Evaluation: Correctness of the students answers on the worksheet.

6. **Right Mode - "Messing Around"**

Objective: To further apply the use of the calculator in application problems.

Activity: In cooperative groups, have the students work on application problems (such as area and volume) which can be simplified by using special functions of the scientific calculator.

Evaluation: Quality of the assignment.

7. **Left Mode - Analyzing Their Own Application Of The Concepts For Usefulness**

Objective: To reflect on the scientific calculator's capabilities.

Activity: Discuss what the calculator can do and how it could help them in math, science, and other courses, as well as applications at home. Also discuss how a calculator might be used in various occupations (business, manufacturing, accounting, etc.).

Evaluation: Quality of discussion.

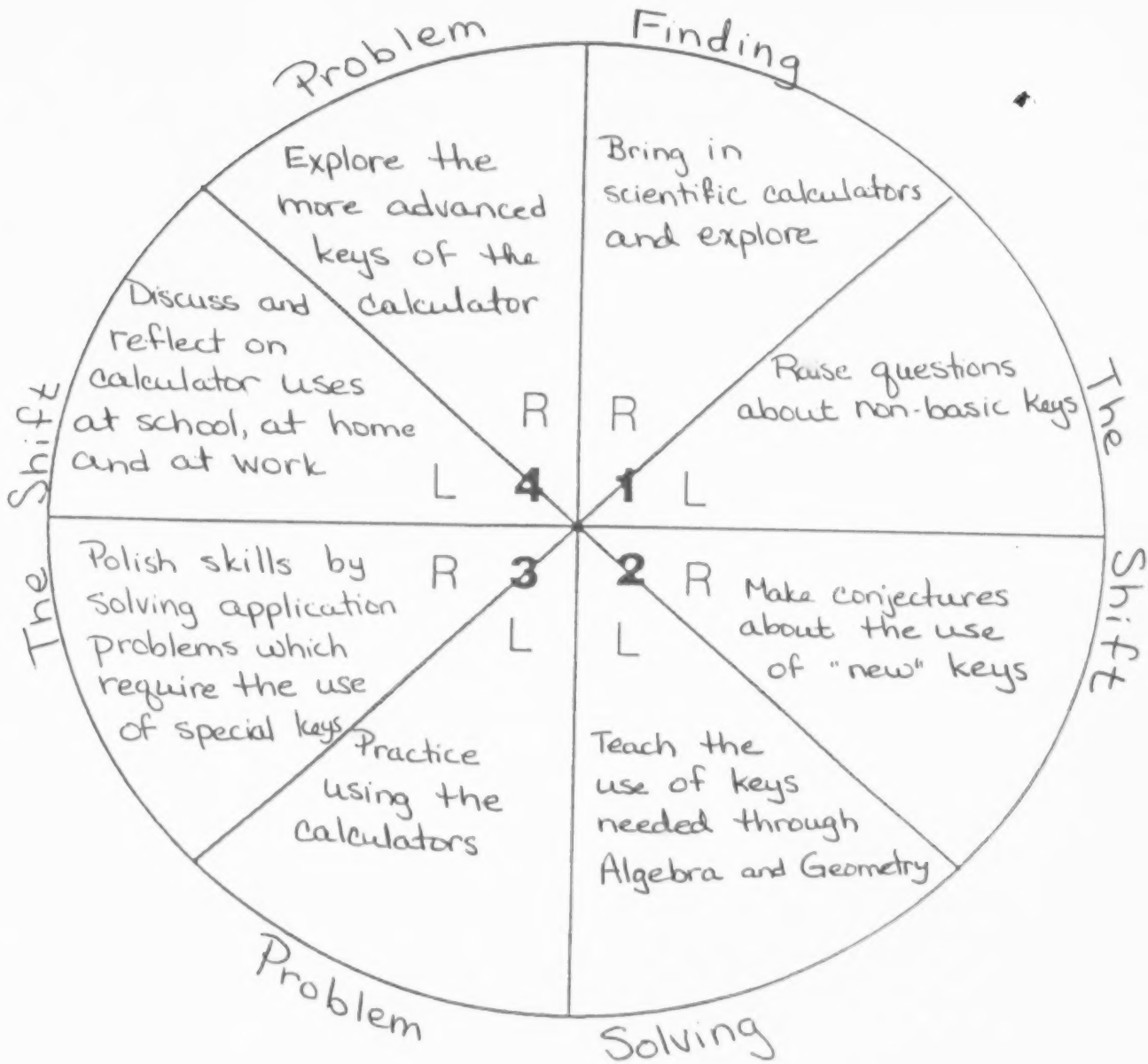
8. **Right Mode - Doing It Themselves And Sharing What They Do With Others**

Objective: To allow students to investigate advanced calculator functions.

Activity: Ask students to use the calculator manuals to determine uses of some of the more advanced functions (sine, cosine, tangent, polar coordinates, logarithms, etc.). Have the students share their findings.

Evaluation: Student's participation.

Mathematics: Using a Scientific Calculator



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Mathematics Lesson Plan
Regular Polygons

Authors: Patrick Cotter, Carol Falzone, John Hagan, Kris Johnson, Diane Koenig, Darlene Osborne, and Betty Szott

Objective: To find the length of a side of a regular polygon using right triangle trigonometry given the number of vertices and the length of the radius.

1. **Right Mode - Create An Experience**

   Objective: To get students attention.

   Activity: Bring in flywheels of different sizes with 5 pressure plate bolts that are equally spaced. Bring in T-shirts with 5 buttons equally spaced arranged in a circular pattern. Pass these items around the class.

   Evaluation: Observe the students reactions.

2. **Left Mode - Analyze The Experience**

   Objective: To find the relationship between the different objects.

   Activity: Discuss the relationship between the different objects. What do the objects have in common?

   Evaluation: Quality of the discussion.

3. **Right Mode - Integrate Reflections Into Concepts**

   Objective: To confirm the students visual observations.

   Activity: Have compasses, rulers, protractors, etc. available. Have the students pick whatever they think will be helpful in confirming their conjectures.

   Evaluation: Students active involvement.

4. **Left Mode - Develop Theories And Concepts**

   Objective: To teach the concept of the distance between vertices of a regular pentagon.

   Activity: Teach the process for finding the length of a side of a regular pentagon given the radius. The teacher teaches using geometric theorems and right triangle trigonometry.

   Evaluation: Objective quiz.

5. **Left Mode - Practicing On Defined Concepts**

Objective: To allow students to practice concepts and reinforce their conjectures.

Activity: Worksheet in which the students calculate the lengths of sides of regular pentagons with varying radii. Some of the problems should use the same radii as in the flywheels and the T-shirts handed out originally.

Evaluation: Correctness of the students answers on the worksheet.

6. **Right Mode - "Messing Around"**

Objective: To personalize the unit.

Activity: Actually measure between the bolts on the flywheel and the buttons on the T-shirts. Compare these findings with the answers the students got on the worksheet. Pose the question "If given the radius, how would you place 5 equally spaced objects around the circle?" Note the connection with the length of the sides of a regular pentagon.

Evaluation: Closeness of the answers on the worksheet with the measurements of the objects.

7. **Left Mode - Analyzing Their Own Application Of The Concepts For Usefulness**

Objective: To talk about other regular polygons.

Activity: Have the students work in groups. Have them make up problems with different number of vertices and radii.

Evaluation: Quality of group problems.

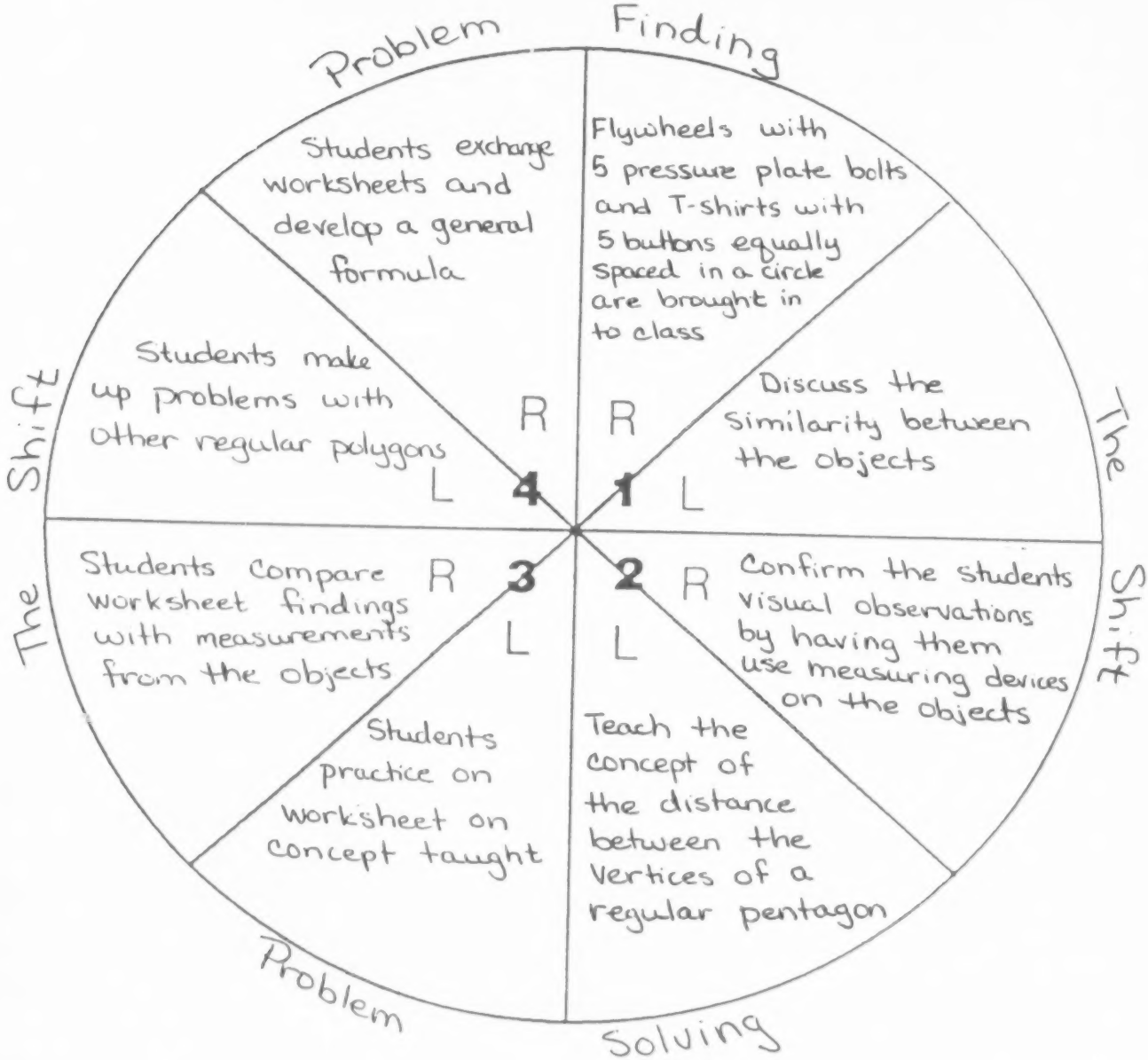
8. **Right Mode - Doing It Themselves And Sharing What They Do With Others**

Objective: To share their findings and to write a general formula.

Activity: Exchange the worksheets between the different groups. Have the students solve the question. As a wrap up, the total class works together to develop a general formula for finding the length of a side of a regular n-gon.

Evaluation: Group participation.

Mathematics: Regular Polygons


Problem Finding
Students exchange worksheets and develop a general formula
Flywheels with 5 pressure plate bolts and T-shirts with 5 buttons equally spaced in a circle are brought in to class
Students make up problems with other regular polygons
Discuss the similarity between the objects
The Shift
The Shift
Students compare worksheet findings with measurements from the objects
Confirm the students visual observations by having them use measuring devices on the objects
Students practice on worksheet on concept taught
Teach the concept of the distance between the vertices of a regular pentagon
Problem Solving
R
L
4
1
3
2

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Science Team
David Zimmerman

OBJECTIVE: To determine the effects of corrosion on metals to show how industry selects materials to minimize the reaction.

1R - Hook 'em

Bring in a sample of rusted metal.
- a muffler from a car

1L - Relate it

Does anyone have a problem like this?
- Why? How did this happen?
- What is the annual cost due to this destruction?

2R - Make it more relavant

What parts of the car will rust?
- Crawl under the car and view the parts to see where rust is developing.

2L - Share knowledge & skills

What speeds corrosion?
What causes corrosion?
- Chemical reactions

$4Fe + 3O_2 \rightarrow 2Fe_2O_3$
$2Mg + O_2 \rightarrow 2MgO$
$4Al + 3O_2 \rightarrow 2Al_2O_3$

3L - Use knowledge and skills

Laboratory experiment

Take test tubes with five metals:
Fe, Cu, Zn, Sn, Al
Place a sample of each of these metals in a test tube with one in water, one in salt water, one in sulfuric acid, one in hydrochloric acid, and periodically wet one sample with a spray bottle of tap water.
Record results as to how quickly corrosion occurs or if it occurs

3R - Use different variables (temperature, surface area, concentrations, time, clean surface vs rough surface)

Run additional experiments on the metals. Change some variables in the experiment. Record results.

4L - Discussion, reflection

Discuss the data. What made the metals corrode more rapidly? What can this suggest?

4R - Introspection

What would you do to better retard corrosion on automobile parts? What is the best metal to use?